The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOL. LVI, No. 20 CHICAGO, ILLINOIS MAY 20, 1911

THE CAUSE OF INFLAMMATION OF CRANIAL NERVES AFTER THE USE OF SALVARSAN

A PLEA FOR THE INTRAVENOUS METHOD

JAY FRANK SCHAMBERG, M.D.
PHILADELPHIA

The new remedy, salvarsan, introduced by Ehrlich and Hata, has now been used in over 50,000 cases. It is conceded by all to be the most effective drug in syphilis known to medical science. Used properly in appropriate cases, it is as safe as most other potent remedial agents. Ehrlich regards salvarsan as less poisonous than mercury, if cases of heart disease and severe cases of paralysis are excluded.

The only disturbing results that have been reported after the use of salvarsan are occasional inflammation of cranial nerves, particularly of the optic and auditory nerves. Relative to the number of cases treated, the incidence of such complications has been very small, probably not one in a thousand.

It is probable, however, that some cases have occurred that have not been placed on record. Furthermore, the seriousness of such complications makes it imperative that their cause be thoroughly studied. Ehrlich has kept thoroughly in touch with these complications, and with all the evidence in his possession, he denies any etiologic relationship between the use of the drug and the development of the neuritis. He regards them all as cases of *neuro-recidiv*, i. e., fresh syphilitic neuritis.

There are a number of able clinicians abroad, however, who are not willing to exculpate the drug as a causative influence.

CASES OF OPTIC NEURITIS REPORTED

Professor Finger,[1] of Vienna, a noted syphilologist, has reported four cases (the first four following) of optic nerve disturbance:

CASE 1.—Robust 19-year-old girl with initial lesion and beginning roseola. Infection eight weeks before. August 2, 1910, she received 0.45 gm. of salvarsan intragluteally. Prompt regression of lesions and negative Wassermann on September 20. October 5, she returned with headache, visual disturbance, vertigo, right-sided oculomotor paresis and beginning left optic neuritis. October 12, she was given 0.45 gm. salvarsan subcutaneously, in acid solution. October 28, mercury and iodids administered without result: neuritis of the right optic nerve set in.

CASE 2.—Girl, 19 years old, with lues of two and one-half months' duration. July 20, 1910, she received 0.4 gm. salvarsan in neutral suspension. By August 5, regression of all lesions had occurred, but returned October 18, with visual disturbances and abducens paresis.

1. Wien. klin. Wchnschr., 1910, No. 47.

CASE 3.—Girl, 22 years old, who had been treated for malignant lues, with mercury and iodids and thirty injections of arsacetin and eighteen of enesol. July 6, 1910, the patient received 0.4 gm. salvarsan for gummata of nose and pharynx. September 5, three months later, symptoms of beginning optic atrophy with visual disturbances, sluggish pupils and contracted fields were present.

CASE 4.—Man, 28 years old, with lues of five months' duration. Aug. 8, 1910, received 0.45 gm. of salvarsan. October 3, the Wassermann reaction was negative. He returned Nov. 10 with a chorioiditis of the right eye.

CASE 5.—Kowalewski,[2] of Berlin, reported the case of a 28-year-old woman, injected with salvarsan in the spring of 1910, for an early syphilid. Rapid improvement. In July symptoms of luetic meningitis and neuritis optica developed. The employment of mercurial inunctions was followed by a rapid cure.

Blaschko[3] reported before the Berliner dermatologische Gesellschaft, Dec. 13, 1910, a second case of neuritis optica which he had observed after injections of salvarsan. He stated that the cases were different from the toxic optic atrophy encountered after atoxyl.

Held, at the same meeting, likewise reported a case of optic neuritis after salvarsan.

Rille,[4] of Leipsic, reported two cases of optic neuritis in association with auditory disturbances after salvarsan, and a third case of auditory disease alone. These will be referred to later.

In the discussion following the reading of Finger's paper, November 18, 1910, before the Royal Medical Society of Vienna, the following cases were reported:[5]

Oppenheim, out of sixty-four cases, observed one case of optic neuritis treated with salvarsan for secondary lues.

Nobl saw no injurious results among seventy-two patients.

Von Zumbusch, out of 300 cases, observed one of optic neuritis, which improved under mercury and then relapsed. A short time before he had seen a similar case which occurred in a patient treated only with mercurial injections.

Dimmer treated many eye lesions, including seven cases of iridocyclitis luetica, with salvarsan, with very good results. In one case there was a recurrence with severe papilloretinitis.

Doerr had uniformly good results in 270 cases.

Carl Stern[6] reports cases of oculomotor palsy after subcutaneous injections of salvarsan. Stern has observed three cases of oculomotor paralysis in 200 patients treated with salvarsan. The patients had negative Wassermann reactions.

2. Berl. klin. Wchnschr., Nov. 21, 1910, p. 2141.
3. Monatsh. f. prakt., Dermat., lii, No. 2, p. 70.
4. Berl. klin. Wchnschr., 1910, No. 50.
5. Abstr. in Monatsh. f. prakt., Dermat., 1911, lii, No. 6, p. 308.
6. Deutsch. med. Wchnschr., Jan. 5, 1911, p. 15.

CASE 6.—Fordyce[7] reports the case of a physician with a digital chancre and secondaries, who received 0.6 gm. of salvarsan Oct. 7, 1910. In November, he suddenly developed a choked disk. Fordyce also reports a similar case which developed while the patient was under mercurial treatment and which was cured with salvarsan.

CASE 7.—Schamberg[8] reported the case of a woman, aged 29, who presented herself Nov. 10, 1910, with a general macular eruption of three months' duration, with persistent headaches during this period. Wassermann reaction +++. November 11, she received 0.45 gm. of salvarsan in neutral suspension subcutaneously. On the following day she said the "misty vision" (of which she had not previously spoken) and the headache had disappeared. Gradual disappearance of the eruption. She returned December 28, complaining of severe headaches, vertigo, vomiting and loss of vision in right eye, with some dimness in left. Dr. George E. de Schweinitz, who examined her, reported choked disk with retinal hemorrhage, and almost no vision in right eye, with beginning involvement of left. She was later vigorously treated with mercury and iodids by Dr. Howard Hansell and on discharge from the hospital was greatly improved, having 20/40 vision in right eye and 20/30 in left.

AUDITORY NERVE DISTURBANCE

Finger reported the three following cases (8, 9, 10):

CASE 8.—Man, aged 22. Cutaneous syphilis and periostitis. Aug. 24, 1910, 0.5 gm. neutral salvarsan injected. Next day nystagmus, dizziness, typical falling symptoms; normal hearing. Diagnosis, vestibular nerve disturbance. Complete recovery in a few days.

CASE 9.—Man, aged 25. Syphilis of six weeks' duration. Aug. 27, 1910, 0.45 gm. salvarsan injected subcutaneously. Later negative Wassermann. Nine weeks after injection, dizziness and deafness developed. Diagnosis, bilateral labyrinthine deafness. Conditions remained unchanged.

CASE 10.—Girl, aged 18. Syphilis of three months' duration. Aug. 5, 1910, 0.45 gm. salvarsan injected subcutaneously. November 3, complained of dizziness and headache. Diagnosis, labyrinthine deafness, dizziness and spontaneous nystagmus. No improvement by Nov. 27, 1911. Wassermann negative.

CASE 11.—Dr. H. Frey[9] reported a case of deafness and some vestibular nystagmus in a patient injected Aug. 9, and returning in October with the above mentioned symptoms. He had treated 100 patients with salvarsan.

Rille reported three (12, 13, 14):

CASE 12.—Woman, aged 21, with early syphilis. Injected July 7, 1910, 0.45 gm. salvarsan. Four weeks later there developed dizziness, noises and deafness in right ear. Later partial facial paralysis. Up to Nov. 15, 1910, some improvement.

CASE 13.—Girl, aged 18. Salvarsan, 0.45 gm., injected July 10. Oct. 10, headaches and dizziness, and on following day right-sided facial paralysis, followed in three days by optic neuritis. Under mercurial inunctions, the facial palsy and other symptoms disappeared. Patient cured.

CASE 14.—Man, aged 32. July 7, injection of salvarsan. In middle of October, high-grade double labyrinthine disease developed.

In the discussion following the reading of Finger's paper, the following cases were reported:

Kren examined eighty-nine of 140 patients treated with salvarsan in Riehl's clinic. In one case two months after the injection there was a slight labyrinthine impairment of hearing, with a negative Wassermann.

Urbantschitsch examined the ears of sixty patients treated by Finger, Riehl and Ehrmann and observed five cases of suppression of function of the vestibular nerve, which developed shortly after the injection and rapidly disappeared.

Matzenauer had one case of auditory disturbance in 126 cases.

Ullmann treated sixty-two patients without any complications.

Rusch observed a case of severe involvement of the auditory nerve two months after the use of salvarsan.

Finger reported one additional case of auditory nerve disease, Beck a case of one-sided deafness from the clinic of Zumbusch and one case of vestibular disease was seen by Zechmeister of Sarajewo.

Alexander,[10] of Vienna, reports the following case (15) of a patient treated by Nobl:

CASE 15.—Woman, aged 30, contracted syphilis in the spring of 1910, received injections of mercury and at the end of July complained of deafness and tinnitus in right ear. This was later cured. In October trouble with left ear began, which was treated with salvarsan. In November left ear grew worse and ended in complete deafness.

CASE 16.—Dr. George L. Richards,[11] Fall River, Mass., refers to two patients of Dr. Daniel Kaufman, who had deafness and labyrinthine symptoms some time after injections of salvarsan. Wassermann positive. Under mercurial injections, the symptoms were improving.

CASE 17.—Zeissl,[12] of Vienna, saw a patient who developed facial palsy and tinnitus. The patient received salvarsan intragluteally August 7. November 7, the facial palsy developed.

CASE 18.—Paul Lazarus[13] had a patient in whom left-sided labyrinthine disease with tinnitus and deafness developed three days after an injection. In some days this disappeared.

Von Zumbusch found in the literature among 7,000 cases of patients treated with salvarsan in twenty-five clinics, nine cases of auditory nerve disturbance. All were cases of syphilis between the second and the seventh month. In most cases the Wassermann reaction was negative.

There are doubtless other cases of optic and auditory neuritis that have been reported, which have escaped my search. While the detailed references to these cases give perhaps an alarming impression, it is perhaps well to state that the entire number of cases of optic and auditory disease here abstracted is not over twenty-five.

EHRLICH'S COMMENTS

In September, 1910, Ehrlich[14] addressed an inquiry to a large number of clinicians, and determined that not a single case of blindness had occurred among 8,000 patients treated with salvarsan. Since that time one case of retinal atrophy has occurred (Case 3 of Finger), and this patient had had almost a year's prior treatment with arsenical preparations, such as arsacetin, enesol, etc. Ehrlich believes that a hypersusceptibility to arsenic was thus established. A large number of observers including Deutschmann, Gross, Havan, Ogersheimer, Römer, Schanz, Wechselmann (1,400 cases) and Seeligsohn have reported good results in the treatment of luetic ocular conditions. They did not observe any bad effects even in optic atrophy. In syphilitic retinal conditions, splendid results were often obtained. Ehrlich states that salvarsan itself has no injurious effects on the eye.

In regard to auditory disease, Ehrlich made an inquiry of twenty-five clinicians who had treated 7,000 patients with salvarsan: but nine cases of auditory nerve disturbance had been encountered.

7. Fordyce, John A.: The Modern Treatment of Syphilis, with Reference to the Recent Synthetic Preparations, THE JOURNAL A. M. A., Jan. 21, 1911, p. 186.
8. Univ. Penn. Med. Bull., January, 1911.
9. Wien. klin. Wchnschr., 1910, No. 50.
10. Alexander: Boston Med. and Surg Jour., March 9, 1911.
11. Boston Med. and Surg. Jour., March 9, 1911.
12. Wien. med. Wchnschr., 1911, No. 7, p. 439.
13. Deutsch. med. Wchnschr., Jan. 26, 1911.
14. München. med. Wchnschr., Jan. 3, 1911.

LUETIC OPTIC AND AUDITORY NEURITIS BEFORE THE USE OF SALVARSAN

A careful study of the reported cases of optic and auditory trouble following the use of salvarsan leads convincingly to the conclusion that all, or nearly all, of these cases were instances of syphilitic neuritis or *Neurorecidiven,* as they have been called abroad. In proof of this is the fact that many have been improved or cured by mercury and the iodids or a second dose of salvarsan. The important question is whether the salvarsan employed has been a determining factor in their development.

ARE CRANIAL NERVE INFLAMMATIONS COMMONER AFTER SALVARSAN THAN AFTER THE OLD TREATMENT OF LUES?

On this question there is difference of opinion. The known injurious effects of atoxyl and similar substances on the cranial nerves led Ehrlich at the outset to warn against the use of salvarsan in optic nerve conditions. With increasing experience he became convinced of the harmlessness of the new remedy.

Finger, Alexander, Rille and others feel that cranial nerve complications are more commonly seen now than under former methods of treatment. Professor Alexander, the Vienna otologist, states that in the course of six years before salvarsan, he had seen only twelve cases of ear disease in the early stages of syphilis. According to him, acute neuritis of the auditory nerve in early syphilis is very rare.

On the other hand, Professor Urbantschitsch, of Vienna, had previously called attention to disturbances of the optic and auditory nerves after the use of soluble mercury salts.

Jansen, of Berlin, stated to Ehrlich that auditory nerve trouble is by no means rare in recent syphilis. He had obtained further improvement from second injections of salvarsan in such cases.

Paul Lazarus[15] says that latent vestibular disease in luetics is commoner than is believed.

Kreibich[16] saw in Graz in one year, four cases of luetic recurrence affecting the auditory nerve, before the introduction of salvarsan; in Prague in four years he had seen only two cases.

Benario, of Frankfort,[17] in view of Finger's reports, searched through a part of the case reports sent to Ehrlich, and utilizing only those with exhaustive data, found seven cases (Cases 19 to 24, and 28) of auditory nerve disturbance before the use of salvarsan. In addition, data concerning three other cases (Cases 25, 26, 27) were communicated in letters. All were early cases.

CASE 19.—Woman, aged 23. Mercury salicylate injections. Complete deafness in one ear and partial in other; oculomotor palsy. After two injections of salvarsan, complete cure.

CASE 20.—Man, aged 27. Mercurial treatment. Facial and auditory palsy three months after infection. After salvarsan, disappearance of symptoms in three days. Brilliant result.

CASE 21.—Woman. Received forty mercurial injections; six months after infection, facial palsy, almost complete deafness, diplopia and ptosis. (Disappearance of facial palsy under mercury). After salvarsan, improvement in hearing and disappearance of diplopia.

CASE 22.—Man, aged 22. Forty mercurial injections. Five months after infection, right-sided facial palsy and deafness in right ear. No improvement in hearing after salvarsan.

CASE 23.—Man. Six injections of insoluble mercury salts. One month after infection almost complete deafness. Following use of salvarsan, gradual restoration of hearing to normal.

CASE 24.—Woman, aged 39. Eighteen injections of salicylate of mercury. About three months after infection, partial deafness in both ears; could not hear conversation Ten days after salvarsan, great improvement. At time of last report, hearing normal.

CASE 25.—Woman, aged 34. Three months after infection, partial deafness. After use of salvarsan, rapid improvement. At present, hearing normal.

CASE 26.—Woman, aged 30. Eight mercury injections. Several months later, labyrinthine disease (tinnitus, partial deafness, vertigo). Cure under mercury.

CASE 27.—Complete deafness during secondary stage. Could not hear pistol shot. Mercury used without results. Improvement under salvarsan. Can now hear loud conversation.

CASE 28.—Reported by Professor Unna, of Hamburg (Unna: *Monatsh. f. prakt. Derm.*, 1910, li, No. 12). Musician developed during the remission period impaired memory, failure of concentration, tinnitus and impaired hearing. Patient had previously had mercurial treatment. After an injection of salvarsan, all the symptoms disappeared except the one most important to the patient, namely, his deafness, but this was gradually cured in the course of a number of weeks.

Becker,[18] in 1907, found among 200 syphilitics in the early period, 6 per cent. of cases of optic neuritis.

Fehr, of Berlin, examined the eyes of a large number of Wechselmann's patients and stated that before treatment he found 2 to 3 per cent. of cases of neuritis, choked disk and retrobulbar neuritis without subjective disturbance.

Wechselmann says that among more than 1,400 patients treated with salvarsan, he did not observe any ocular trouble, although ophthalmic examinations were pretty generally carried out. In two cases, there were temporary "floating specks."

RESULTS OF TREATMENT

In a considerable number of cases, the optic and auditory trouble has improved or cleared up under the use of antisyphilitic remedies. Patients with neuritis occurring spontaneously or after mercury have often done well under salvarsan or further mercurial treatment, and in cases occurring after the use of salvarsan the patients have often improved under a second dose or under mercury and the iodids.

Marshalko[19] says beginning optic atrophy is no contra-indication to the use of salvarsan if the drug is otherwise indicated. After consultation with Professor Imre, director of the Eye Clinic in Klausenberg, Marshalko injected a number of such patients. No injury occurred in any case; indeed, the process became stationary in some, and in others there was apparent improvement. These results prove that the neuritis is not a primary toxic condition, but a fresh syphilitic involvement, a conclusion most pertinent to this discussion.

Another point of interest is that in all or nearly all of the cases reported the patients have been in the early stage of syphilis, between the second and eighth month after infection. This is additional evidence of the luetic nature of the process.

Furthermore, all of the cases have occurred after the subcutaneous or intragluteal use of mercury and none, so far as the reports go, after the intravenous administration.

This is most suggestive in view of the fact that the intravenous administration is the most intensive method

15. Deutsch. med. Wchnschr., Jan. 26, 1911, p. 186.
16. Deutsch. med. Wchnschr., Jan. 5, 1911, p. 11.
17. München. med. Wchnschr., Jan. 3, 1911, p. 20.
18. Quoted by Riehl: Wien. klin. Wchnschr., 1910, No. 51.
19. Deutsch. med. Wchnschr., Feb. 2, 1911, p. 199.

of treatment. Furthermore, among those clinicians who have used the largest doses of salvarsan (Gennerich, Duhot, Weintraud) neuritic disturbances have not been observed.

THEORIES AS TO THE CAUSE OF THE COMPLICATIONS

Abstracting the views of various men, the following propositions may be formulated:

1. The optic and auditory nerve trouble is syphilitic in character and may occur spontaneously or after mercury or salvarsan, and is unrelated to the latter (Ehrlich).

2. These complications are syphilitic, but in some way related to the administration of salvarsan, perhaps due to the traumatic effect of the drug on the nerves (Finger, Rille et al.).

3. When occurring early, it is suggested that the complications may be an effect analogous to the Herxheimer reaction (Urbantschitsch, Pincus, et al.).

4. It is believed by some observers that the introduction of salvarsan in "depots" in the subcutaneous or muscular tissues, where much of it may remain and undergo chemical change, may be responsible for a toxic effect on nerve structure.

5. I believe that an important factor in many cases in the production of the neuritic complications has been the cessation of treatment after a single subcutaneous or intramuscular dose of salvarsan; so much was anticipated concerning the radical curative effects of salvarsan that no subsequent treatment was given for months. In sixteen cases in which the dates of the administration of the salvarsan and of the development of the neuritis are given, between two and three months elapsed in twelve of the cases. In a very few cases, it must be admitted, the complications have arisen within a few days. In these cases it is suggested that the condition may be analogous to the Herxheimer cutaneous reaction. If the neuritic manifestations are commoner after salvarsan than after mercury, the discontinuance of treatment may account for the difference, for mercurial treatment is continued for a much longer period of time. If subcutaneous and intragluteal injections are administered they should be followed in a short time by other treatment. It is reasonable to believe that this would in large part prevent the neuritic inflammations, as they are as a rule favorably influenced by the readministration of treatment.

A PLEA FOR THE INTRAVENOUS USE OF SALVARSAN

Not only is the intravenous administration of salvarsan infinitely less painful than the subcutaneous or intragluteal methods; not only does it obviate the liability to tumefactions, abscesses, and necrosis of tissue, but it is decidedly more effective.

Schreiber, of Magdeburg, who has used intravenous injections, and at times reinjections, in over 800 cases, has observed only four recurrences. In the early period when he employed intramuscular injections, he encountered seventeen recurrences out of a relatively small number injected.

Writing in October, 1910, Schreiber[20] said that in over 400 patients treated intravenously, he had observed no untoward effects on the eyes.

A. Frankel[21] states that an intravenous injection cured a patient with tertiary lues of the skin whose case had not been influenced six weeks before by an intramuscular injection.

In my own experience, I have found the intravenous injections to be distinctly more efficacious than the treatment by other routes. To be sure, subcutaneous or intragluteal injections will often effect a disappearance of the lesions, but this does not teach us the extent to which the underlying disease has been influenced.

It is proved that recurrences are much less early and less frequent after intravenous injections than after administration by other methods. It appears also that inflammations of the cranial nerves have only occurred after intramuscular and subcutaneous injections, therefore, the superior advantages of the blood route over other methods seem to be established.

The theoretical consideration that elimination is more rapid after intravenous injections should not weigh as an argument against the determined clinical results. Arthur Bornstein[22] has shown by experimental research on animals, that the largest part of the dose of salvarsan administered intravenously does not remain free in the blood, but is deposited in the liver, spleen and kidneys.

CONCLUSIONS

1. Inflammation of the optic, auditory, facial and other cranial nerves has developed in a minute percentage of cases after the use of salvarsan in syphilis.

2. The same complications may occur spontaneously or after the use of mercury.

3. Whether the incidence of such neuritic complications is larger after salvarsan than after mercury is a mooted question, on which foreign specialists are not agreed.

4. These inflammations have occurred almost exclusively in cases of recent syphilis.

5. They appear to have occurred exclusively after intramuscular and subcutaneous injections and not after the intravenous administration.

6. Optic and auditory neuritis have in many instances cleared up under a second dose of salvarsan or under mercury and the iodids.

7. Most of the cases of neuritis have occurred two to three months after a single injection. A risk is incurred in discontinuing antisyphilitic treatment for a long period in early syphilis, after a single injection of salvarsan, particularly when given subcutaneously or intramuscularly. It would be, of course, likewise dangerous to cease treatment after brief mercurial administration.

8. The intravenous method of treatment has many advantages over the treatment by other routes.

1922 Spruce Street.

20. Deutsch. med. Wchnschr., Oct. 13, 1910, p. 1890.
21. Deutsch. med. Wchnschr., Jan. 26, 1911, p. 18.
22. Deutsch. med. Wchnschr., Jan. 19, 1911, p. 112.

Intestinal Surgery.—The present-day success of intestinal surgery is due largely to careful observations of conservative clinicians. Great progress was made when surgeons had a fair understanding of bacteriology and biology and a clearer conception of the vital processes in connection with all lesions within the abdomen. The part played by the peritoneum in connection with infection within the abdominal cavity and the repair of wounds of the intestines is now known and has greatly modified surgical technic. The study of phagocytosis, antibodies and opsonins in the blood has enlarged the surgical horizon. The elimination of all possible bacteria from the alimentary canal previous to the operation and the strict observance of asepsis at the time of operation has greatly increased the possibility of success in intestinal work.—A. E. Benjamin, in *Lancet-Clinic.*

IMPERMEABLE CARDIOSPASM SUCCESSFULLY TREATED BY THORACOTOMY AND ESOPHAGOPLICATION

WILLY MEYER, M.D.
NEW YORK

The operative method carried out in the case described below may be of interest, and perhaps also of some practical value.

History.—R. M., a woman, aged 47, sick for fifteen years with typical symptoms of cardiospasm, with frequent regurgitation, became worse gradually; she was treated by a number of physicians, but the cardia was never dilated; of late the patient had been unable to swallow anything. The patient entered the medical division of the German Hospital (Dr. M. Einhorn). Neither sounds nor dilator could be made to pass into the stomach; they evidently slipped sideways into an esophageal pouch, which rested on the diaphragm. Metal sounds passed down a distance of 17¼ inches from the teeth before they met resistance (14 inches being the normal distance in grown persons); flexible tubes could be made to pass 1½ inch further down. Rectal feeding had to be resorted to, but soon had to give way to a gastrostomy according to Kader's method (Dr. M. Rehling). Operation was well borne, and the patient was instructed to chew her food, but instead of swallowing it, to spit it into a receptacle partially filled with some kind of nourishing fluid, from which it was then poured into the stomach. In spite of this she did not gain and asked to be relieved by operation.

The proposition made to her to let me try first to pass the contracted cardia with the help of the esophagoscope was refused, and was not particularly pressed in view of the unfavorable results obtained by others in cases of such long standing. An attempt was made, however, to pass the cardia from below, for which purpose the stomach was washed clean and direct gastroscopy performed with the electric cystoscope introduced through the gastric fistula. Owing to the lack of proper landmarks I did not succeed in definitely locating the cardia, an experience I had frequently had before in similar cases; nor was I able to pass a ureter catheter by means of the ureter catheterizing cystoscope, although at one time a metal probe had been introduced through her mouth down to the obstruction, and this, as well as the ureter cystoscope, had been made visible with the help of the fluoroscope, the *x*-ray tube being placed at the back of the patient for the purpose of locating the cardia. The failure was evidently due to the fact that the cardia proper could not be pressed forward by the sound.

After consultation with Dr. Einhorn I decided to perform thoracotomy under differential pressure and, if the diffuse esophageal pouch demonstrated by the *x*-rays should be found to be due to cardiospasm and not to a carcinoma which might have developed on the basis of an old ulceration, I would then try to reduce its diameter by esophagoplication. Excision of a large ellipsoid piece of the entire length of the esophageal wall with immediate suture would have been a more radical step. However, such an operation would have involved greater risk than it seemed wise to take in view of the patient's greatly reduced condition; she weighed 87 pounds.

Operation.—May 31, 1910, operation was performed under positive differential pressure by means of the positive chamber in use at the German Hospital since April, 1909. Stomach lavage was first performed, the gastric tube removed and the fistula packed with iodoform gauze and covered with zinc adhesive plaster. The patient was given a hypodermic injection of morphin ⅛ gr., atropin 1/100, and, by hypodermoclysis, 1,000 c.c. saline solution. Anesthol anesthesia was employed, with two narcotizers in the chamber, with oxygen tank and esophageal sounds. The thorax was put on the stretch by means of the new operating-table for thoracic surgery elsewhere described,[1] a curved incision was made over the sixth to the tenth ribs, exactly corresponding in direction with the lower part of the typical Schede incision, and a skin and muscle flap raised. An incision was then made in the eighth intercostal space. The lung was superficially injured on dividing the pleura because of a total adherence of the lung to the costal pleura. Careful blunt dissection was done and the incision lengthened anteriorly and posteriorly. The wound was then gently separated and the rib-spreader inserted, but, in order to avoid rib fracture, wide separation was not forced. Separation of the lung from the costal and diaphragmatic pleura posteriorly proved easily feasible. A number of double ligatures, with divisions between, were needed for firm ligamentous bands. When the lung was pushed off from the anterior mediastinum it tore at two places, which were temporarily covered with moist gauze sponge. When the loosened lung (which remained adherent inwardly) was pushed upward and inward, away from the diaphragm and aorta, a large pear-shaped swelling was seen, corresponding to the lower end of the esophagus. This evidently was the sac in which the instruments had been caught. The overlying pleura was split, the pneumogastric nerves made out and thoroughly separated from the esophagus on either side for fully five inches. The sac was loosened all around with both hands until the fingertips met posteriorly at the spinal column. The cardia was palpated through the diaphragm and found not infiltrated and could be pulled into the thorax for a distance of about one inch without opening the abdominal cavity, a phenomenon also observed in previous cases. The cardia was surrounded by the finger, then by a piece of twisted gauze, the ends of which were clamped. This gave a good hold. The tip of a long flexible sound now introduced into the esophagus was felt in the pouch posteriorly and laterally over the spinal column. It was lifted by the left hand, which rested behind the esophagus, and met by the right in front which guided it toward the cardia, the latter resting on the gauze handle. The sound passed the cardia nicely, its upper end being gently pushed by the narcotizer. This proved conclusively that the cardia was permeable to instruments.

The sound being withdrawn, a double esophagoplication was done, the same as is done when performing gastrotomy according to Kader. Interrupted silk sutures, flat curved needles and the indispensable "Küster's swan" were used,[1] care being taken not to penetrate the esophageal wall and not to include the pneumogastric nerves. Meanwhile an intravenous injection of saline with 20 mm. of adrenalin had become necessary. The esophagus was then dropped back into its normal place and the initial lung incisions and tears stitched with a straight round needle threaded with fine silk, grasping just enough of the pleura to close the wound. Suture of the rents near the mediastinum were technically difficult or impossible and a small flap of parietal pleura just hanging handy was stitched on to the lung to cover one of the rents. Air was thought to be heard passing out of the lung now and then. Closure of the thoracic wound was then undertaken. Two pericostal silk sutures, tied, held the ribs in proper apposition until three double chromicized catgut retention sutures, made to pass through drill-holes in the middle of the lower rib and surrounding the upper one were tightened. Then the silk sutures were cut and removed. The external wound was closed with continuous catgut sutures and the dressing applied. The patient was removed from cabinet and returned to bed; pulse was 108; stimulation was employed.

Postoperative History.—On the following day at noon there was cyanosis and dyspnea, a pulse of 140 and increased respiration. Diagnosis: compression of lung by fluid or air, which latter, it was thought, might have escaped through the pulmonary tear that could not be sutured. To make sure of this, the patient was brought back to the cabinet and the pressure turned on, with everything ready to reopen the wound in case of increase of dyspnea, which would indicate the presence of a pressure pneumothorax. Fortunately, this did not happen, and, as the patient felt comfortable under differential pressure and complained of difficulty in breathing the moment it was stopped, she was left in the apparatus for almost ten hours, food being given frequently through the tube which had been reintroduced through the gastric fistula. When the head was removed from the chamber at 9 p. m. and the patient placed

1. Ann. Surg., July, 1910, p. 40.

in an upright position, her lips were red as before, and pulse unchanged. She was then brought back to her bed and went on to recovery.

Interesting points during convalescence were:

1. Accumulation of about one pint of turbid sanguinolent serum, which necessitated drainage on the twentieth day after operation; rib resection was done under cocain, making use of the lowest part of the curved skin incision.

2. A hematogenous infection of the right (movable) kidney, with perinephritis.

3. Spontaneous return of the ability to swallow any kind of food, not only liquid, but also solid.

In the fourth week after operation in this case, sudden dysuria with fever and local tenderness over the right kidney set in; the urine contained pus. As catheterization had not become necessary at any time after operation, and patient had been free from urinary trouble before, we had to diagnose a hematogenous infection. Medicinal treatment was resorted to. Subsequently the infiltration was very much reduced, the urine clear and bilaterally normal, as proved by ureteral catheterization. Evidently a cortical abscess had perforated into the perinephritic fat.

In the third week after the operation, during a very hot night, the patient drank a whole glass of water, passing it into the stomach without any trouble. So far she had been fed exclusively through the gastric fistula and had been warned not to make use of the esophagus for feeding purposes. One week later semisolid, and soon thereafter, solid food passed through the cardia without any difficulty. This favorable condition continued unchanged since the middle of June, 1910, that is over six months, and may, therefore, be considered a permanently established feature. Later, six and a half months after the operation, the patient was absolutely well.[2] The wound remained definitely closed since the middle of July, 1910. The patient swallows her food with perfect ease; there is never any difficulty in deglutition, nor the slightest tendency to regurgitation. She weighs 118 pounds against 87 pounds before the operation, and is gaining steadily. At times there was a slight rise of temperature due to the still present perinephritic infiltration.

The cure of the impermeable cardiospasm in this case seems to have been due, first, to the forcible separation of both pneumogastrics from the esophagus, tearing the many tiny nerve fibers that enter the muscularis of this organ on either side; second, to the artificial reduction of the circumference of the pouch.

It had been the intention to sound the esophagus soon after the operation and if the tube passed the cardia, to try the dilator and distend the contracted muscular ring. This became unnecessary, as the desired condition set in spontaneously.

A direct operative attack on the cardia for spasm was first undertaken by the late von Mikulicz. He stretched the cardia with forceps through a gastrotomy wound. Wendel performed osteoplastic resection of the costal arch, following this by a plastic operation according to pyloroplasty by the Heinecke-Mikulicz method.

As an after-effect of thoracic operations on the human subject, it has been a frequent observation by other surgeons, as well as myself, that an effusion of a serous or serosanguinolent fluid takes place into the pleural cavity operated on, and that aspiration of this fluid does not overcome the dyspnea. In the majority of cases the accumulation of this fluid has been the cause of death, or at least has materially contributed to the death. This fact appears to justify the conclusion that the future of thoracic surgery rests on the development of a proper after-treatment. I have thus expressed myself in various medical societies and note from a recent article of Wendel's that he has come to the same conclusion. Air-tight closure of the thoracic cavity whenever possible after the intrathoracic work is finished, has been the advice given by other workers in this field. In the light of the experience gained in this case, however, as well as that which I have had in several other thoracic operations, it seems to me that this dictum may have to be changed or modified. Instead of using air-tight closure, I think it will be necessary for us to learn how to drain the thorax during the first twenty-four hours, perhaps even thirty-six or forty-eight hours, after a severe thoracic operation, without incurring the dangers of a pneumothorax.

Several ways of fulfilling this desideratum come to mind. One of them is the use of the chamber. The head of the patient is kept within the chamber under pressure and tubes drain the thoracic cavity or cavities into the aseptic dressing which has been applied. Relays of assistants and nurses attend to the needs immediately after operation.

Another procedure would be to apply a sort of valve dressing permitting of drainage.

Wendel, in speaking of operations for cancer of the cardia, expresses the intention of draining internally into the abdomen or through the abdomen to the surface after a combined thoracic-abdominal operation.

As soon as the patient has satisfactorily passed the first twenty-four to forty-eight hours and the pleura has ceased to secrete, the drain or drains may be withdrawn and, under increased differential pressure, the wound covered with rubber tissue and a large dressing, closing the thorax air tight.

Should equally favorable results be obtained with the above-described procedure in subsequent similar cases a new method of radical cure of impermeable cardiospasm by the most direct route would then be established.

NOTE: Since I wrote the above, the patient has passed through a severe attack of influenza, January, 1911. Shortly after she had recovered from this attack, the scar resulting from the empyema reopened in one place and gradually an esophageal fistula established itself, producing some leakage through the fistula. Evidently one or more of the silk sutures in the esophageal wall caused a perforation, swallowing meanwhile continuing with perfect ease. This experience teaches that chromicized gut should be used rather than silk for sutures and ligatures within the thorax, if we are unable to guarantee aseptic wound healing.

700 Madison Avenue.

2. The patient was presented before the New York Surgical Society, Nov. 23, 1910.

CARDIOSPASM

REPORT OF A CASE: TREATMENT BY OPERATION AND SUBSEQUENT DILATATION

J. H. IDEN, M.D.

Surgeon, U. S. Navy, on duty with the U. S. S. *Washington*

There is little about cardiospasm found in text-books, and until recently almost nothing in periodical literature. Within the past few years, however, a great deal of attention has been attracted to it, especially in Germany, and the facts stated by careful observers, there and elsewhere, who have been on the alert to detect cases of cardiospasm, would seem to justify the assertion that many of us are overlooking some, and perhaps many, patients affected with this condition.

H. S. Plummer of St. Mary's Hospital, Rochester, Minn., reported forty cases.[1] Only four of his patients were treated by operation, the simpler method of dilatation being sufficient to effect a cure.

1. Plummer, J. A.: THE JOURNAL A. M. A., Aug. 15, 1908, p. 549.

It might be well at this point to define cardiospasm. Cardiospasm is a condition in which there is spasm of the circular fibers of the cardiac orifice or esophageal opening of the stomach; dilatation and retention of food in the esophagus, with periodical regurgitation. This, of course, describes a fully developed case.

The causes of the disease, as collected by Plummer in his full and valuable paper, are as follows:

"First, primary cardiospasm (Meltzer); second, primary atony of the musculature of the esophagus (Rosenheim); third, simultaneous presence of cardiospasm and paralysis of the circular fibers of the esophagus, brought about by paralysis of the vagus (Kraus); fourth, congenital disposition (Fleiner, Zenker, Luschka, and Seivers); fifth, primary esophagitis (Martin); and, sixth, kinking at the hiatus esophagi."

This observer in discussing the causes of the disease says:

> In the study of a considerable number of cases the almost invariable history of a spasm at the onset, followed at a later period by the evidence of dilatation—that is, retention of food in the esophagus—is most convincing evidence that the spasm precedes the dilatation, and primary atony is relatively a rare condition.[1]

While it is true that a spasm of the cardia may be due to, or associated with, lesions of the esophagus or stomach, I do not believe that it is the cause in many cases. Certainly no lesions of these organs, and no history of their previous existence, were found in the case about to be reported.

Swallowing is divided into three acts. I shall consider only the third, in which the food passes through the esophagus. Every part of the tube, as it receives the morsel and is dilated by it, is stimulated to contract: hence an undulatory or peristaltic contraction of the esophagus occurs. If we suppose the bolus to be at one particular place in the tube, it acts stimulatingly on the circular fibers behind it and inhibitingly on those in front; the contraction, therefore, squeezes it into the dilated part in front, where the same process occurs, and this travels the whole length of the tube.[2]

The esophagus does not contract in sections, as was once thought, but there is a peristaltic wave. It is usually thought that the sphincter of the cardia is tonically contracted.[3] However this may be, it is certain that contraction of the esophagus is due to the vagi; and if it is true that these nerves supply the esophagus with motor, and the cardiac sphincter with inhibitory fibers, any disturbance or degenerative changes of these nerves would produce cardiospasm. "Division of both pneumogastric nerves gives rise to paralysis of the esophagus and stomach and firm contractions of the cardiac orifice. These nerves, therefore, normally supply the esophagus with motor, and the cardiac sphincter with inhibitory fibers. If food is swallowed after these nerves are divided, it accumulates in the gullet and never reaches the stomach. While it is true that peristalsis is an inherent property of the muscle, which is normally controlled by nervous agency, it must be remembered that the nervous control is especially marked in the esophagus. . . . It seems probable that the peristaltic contractions of the esophagus, to be efficient, must be supported by nervous influences from outside. In this respect the esophagus is different from the remainder of the alimentary canal."[2]

2. Kirk's Handbook of Physiology, Ed. 21.
3. Gray's Anatomy, Ed. 17.

REPORT OF CASE

History.—M. S., aged 18, unmarried, a farmer, was seen by me Jan. 20, 1910, at the request of his physician. His father had died thirteen years previously with "white swelling" of leg; his mother, brothers and sisters were living and in good health. The patient had measles in early childhood; otherwise had never been ill, and had enjoyed perfect health until the present trouble began, in 1906. He had always been in the habit of eating his meals very rapidly. One morning in 1906, having just finished eating, he suddenly experienced a choking sensation, with considerable pain, in the region of the cardia. He described it by saying that it felt as though part of his breakfast had stuck in his chest. In a short time this passed off and he ate his dinner, about three hours later, without discomfort. Attacks occurred after this about once a week, gradually increasing in frequency, with marked difficulty in swallowing. At first he was able to force all the food into the stomach, but finally part of it seemed "to stop just below the lower end of the breast-bone." The condition gradually grew worse until it would take him from two to three hours to get any considerable amount of food into the stomach. After filling the dilated esophagus, part of the food was forced into the stomach and part was regurgitated. The patient had been treated by a number of physicians without any relief whatever; was compelled to stop working on account of weakness, and because most of his time was taken up trying to eat; had lost weight slowly at first, but very rapidly of late. For the previous month or two the patient had devised a method of getting a certain kind of food into the stomach, and on this alone he had subsisted. A syrupy mixture was made by mashing a few crackers and then adding sugar and water. This was eaten, but did not enter the stomach. After this the patient would swallow solid food until he was conscious that he would regurgitate it if more were taken; then, after taking a sip of weak coffee, he would take a deep inspiration, close his mouth, shove his head forward and with slow pumping motions force the syrupy mixture into the stomach. When this method was successful he had a distinct sensation of food entering the stomach; but when it did not, the air compressed in the throat and mouth, rushed back through his mouth and nose. At other times some of the air gained entrance into the larynx, giving rise to coughing, such as is caused when one has, as is said, "swallowed the wrong way." The solid food would remain in the esophagus until regurgitated, or could be, and usually was, washed out immediately after passage of the syrupy mixture into the stomach. Living in the country, where modern plumbing facilities were not at hand, he had learned that the most convenient method of doing this was to lie on the ground beside a running stream, and after taking several swallows of water allow it to regurgitate and be carried down the stream. In this way he would wash all the retained food from the esophagus.

The difficulty of getting food into the stomach could easily be seen when the patient ate. He could easily swallow liquids or solids up to the amount of two and one-half glassfuls, or about 20 ounces, when, as he stated, he could swallow no more without regurgitating it. This material left in place for three hours could be regurgitated without difficulty, by simply stooping over until all ran out. Of course, during this time a certain amount of the liquid would seep through the cardiac orifice by gravity.

Physical Examination.—The patient was a thin but otherwise healthy-looking youth, about 5 feet 10 inches in height, and weighing 109 pounds. No abnormality could be detected by ordinary examination; urine normal; blood deficient in hemoglobin.

Diagnosis.—The two cardinal symptoms, the difficulty of getting food into the stomach, with frequent regurgitation of food and mucus, at once called attention to some obstruction above the stomach. After the history of the patient was taken, syphilis and the swallowing of caustics and foreign bodies excluded, and a general examination made, a stomach-tube was stiffened with a large esophageal bougie and introduced. The distance from the incisor teeth to the obstruction was measured and found to be 42 cm. At times the tube would

pass through the cardia, not very easily on gentle pressure; at other times with great difficulty, if it could be made to pass at all. The times when it could be made to pass were very few, and then the end of the tube had to be held against the cardia for some time and considerable pressure used. That it could be made to enter the stomach, however, was proved by the entirely different character of food obtained, which showed hydrochloric acid present, and which contained partly digested food with a sour odor. After having thoroughly washed out and entirely emptied the esophagus, a thorough examination was made with the esophagoscope, which revealed no evidence of a diverticulum, new growth, ulcer, fissure or foreign body; the mucous membrane appeared normal, the esophagus large and the walls rather flaccid. Twenty ounces of potato soup containing 20 per cent. of bismuth subnitrate was given and a radiograph of the chest was made. This showed a greatly dilated esophagus, tapering to a point near the cardia. Examination of the contents of the esophagus, two days after eating meat and hard-boiled eggs, showed large pieces of undigested meat and egg and considerable mucus; there was no odor; the reaction was alkaline. There was no evidence of pepsin or hydrochloric acid. From this there seemed to be no doubt that the contents removed were from the esophagus only. Photographs of pieces of solid food were taken. The patient complained of dyspnea and slight discomfort when the esophageal sac was full, which entirely disappeared when the contents were regurgitated, or washed out.

As there seemed to be no doubt as to the diagnosis, it was decided to operate, first, in order that the patient might be fed through a tube fastened in the stomach, thereby permitting the patient to gain strength and weight; second, to allow the dilated esophagus complete rest and to contract as much as possible; and third, that the sphincter might be stretched at the same time that gastrostomy was performed.

Operation.—Jan. 28, 1910, gastrostomy was performed under ether. Witzel's method was used, except that the incision was made longer than four inches, as described in his operation. After opening the peritoneal cavity the stomach was seized, brought out of the wound, and gauze packed around it. An incision was made into the stomach wall large enough to admit the hand. One finger was introduced into the cardiac opening of the stomach and the contraction of the hypertrophied sphincter could easily be felt, resembling the contraction of the uterine cervix before thorough dilatation, preliminary to curettage. Under the control of two fingers a curved intestinal clamp, the blades of which were guarded with rubber tubing, was introduced with some difficulty into the esophageal opening. The blades of the forceps were gradually opened and closed until the cardia was fairly well dilated. No measurement of the distance between the blades was taken; the amount of force used was determined by muscular sense, care being taken not to use sufficient force to tear the esophagus. The forceps was then withdrawn, the opening in the stomach closed in the usual way, except for a hole large enough to introduce a tube with diameter equal to a number 25 French bougie. The operation was then completed according to Witzel's method.

Subsequent Treatment and Course.—Nothing worthy of note occurred immediately after the operation. Rectal alimentation was not resorted to, the patient being fed through the tube in the stomach by introducing a funnel and removing the clamp from the tube. For the first twenty-four hours nothing was given except normal saline solution, by proctoclysis, to relieve thirst. On the ninth day the superficial sutures were removed. The wound had healed by primary union and nothing remained except the fistulous opening into the stomach. In a short time the tube was withdrawn from the stomach and introduced through the fistula each time the patient was fed. At the end of two weeks the patient was up and around, and had learned to introduce the tube and feed himself, but he was not permitted to introduce any food into the stomach other than the amount and kind prescribed. During twenty-four hours the patient was allowed 3 liters of milk, 30 gm. of sugar, 60 gm. of cream and 240 gm. of thick potato soup, with 4 gm. of sodium chlorid. Tincture of ferric chlorid in water (30 minims) was also administered. Up to this time the patient had taken nothing by mouth. This diet was prepared as follows: each morning 3 quarts of milk and six eggs were thoroughly mixed, strained through cheese-cloth and put in a cool place, ready for use at regular intervals; 8 gm. of lactose, 8 gm. of sugar and 30 gm. of cream in 270 gm. water were given morning and night. Potato soup was prepared in the usual manner, and to it the sodium chlorid was added.

Regardless of this liberal diet the patient continually complained of hunger and in order to be sure that he did not increase the amount of food allowed, the tube and funnel were kept by Miss Decou, the chief nurse, who prepared his food and saw that he received it at intervals of about two hours, and to whom much credit is due for the boy's progress and ultimate recovery.

I now began to pass daily an ordinary stomach-tube which in a very short time the patient learned to pass himself without the least difficulty. Three weeks after operation the patient had gained eight pounds, felt strong and no longer complained of being hungry.

Dilatation of the cardia was then begun with an esophageal dilator made by cementing a rubber-dam balloon to one end of a non-elastic rubber tube in such a way that the tube just passed through the balloon. The end of the tube was closed with a rubber plug and a number of holes so punched in it that its lumen communicated with the interior of the balloon. A silk bag was fastened over the balloon in order to preserve its shape, when distended, and a second rubber balloon over this to facilitate the passage of the dilator. The dilator was constricted at its center, by tying silk around it, to lessen the tendency for it to slip into the stomach. The distance to the cardia having been previously found and a mark made on the tube, the dilator was then passed and the balloon distended by water forced in by an ordinary Davidson's syringe. The force used was determined by the tolerance of the patient, care being taken not to increase the size of the dilator by forcing in more water after pain was experienced. The principle of this dilator is essentially the same as that described by Plummer, from whose writing I received the idea, though his is more complete and scientific.

During the fourth week the dilatations were continued every other day, and milk and water were given by mouth, most of which readily passed into the stomach. Five weeks after the operation soft diet was permitted, by mouth, and the fistula in the stomach was allowed to heal. The esophageal sac at this time would hold only a few swallows instead of 20 ounces, which was its capacity before operation.

A radiograph showed the esophagus contracted down to nearly normal. From this time on diet was steadily increased in variety, solids being gradually added. The dilator was introduced every few days.

March 22, 1910, the patient announced that he was well and desired to return to his home in West Virginia, and, on being refused, attempted to prove, as so frequently occurs, that the doctors were not so wise as the patient. That night he celebrated a grand feast on fresh pork, potatoes, etc. At 2 o'clock the following morning I was hurriedly called and informed that "Sandy" was dying. On arriving at his room I found him in great pain, frightened, unable to speak above a whisper, abdomen rigid and greatly distended, rapid pulse, flat on his back, bathed in cold perspiration and evidently suffering from acute dilatation of the stomach. A stomach-tube was passed and the stomach was thoroughly washed out, considerable gas being set free and quantities of large pieces of undigested food were removed; in fact, some of these pieces were so large that the stomach-tube often became clogged and had to be removed to be cleared, and then reintroduced. Washing of the stomach gave almost immediate relief. An enema was then given, which was expelled soon afterwards with considerable quantities of gas.

The patient rested well for the few remaining hours of the night and arose late the next morning a sadder but a wiser boy. He stated that he had gone to the hospital kitchen the previous night and had eaten an excessive amount of food and had "bolted" it, fearing that someone would come in before he had finished.

XUM

From this time on patient improved rapidly, dilating the cardia himself about once a week.

April 11, 1910, the patient was discharged as cured. He then weighed 150 pounds and was eating all varieties of solid food. After that time I saw the patient twice and there had been no return of the disease.

I cannot assign any definite cause for this boy's trouble, unless it was some disturbance or possible degenerative changes in some of the fibers of the pneumogastric nerves. Again, it will be remembered that the patient was in the habit of bolting his food, which, it seems to me, might have caused a stretching of the lower end of the esophagus, producing a relative increase in the obstruction of the cardia. At the same time the suddenness of the onset, with intervals of absence of symptoms and increasing frequency of attacks, would point to primary spasm of the cardia with resultant dilatation of the esophagus. However this may be, the fact remains that the condition existed and has apparently been cured by operation.

The apparent rarity of this disease, the few cases reported in the literature, and especially the small number that have been operated on, seem to justify the report of this case.

In conclusion I wish to express my appreciation of the valuable assistance given me by Assistant Surgeon George F. Cottle, U. S. N., Miss Decou, Nurse Corps, U. S. N., and Hospital Steward C. P. McGarr, U. S. N., who did the radiographic and photographic work.

THE TREATMENT OF COUGH IN THE CONSUMPTIVE

FRANKLIN M. CLASS, M.D.
Instructor in Applied Therapeutics, College of Physicians and Surgeons, Columbia University
NEW YORK

No symptom in pulmonary tuberculosis is more obvious or more annoying than the cough; now rasping and ineffectual, now milder but continuous, now paroxysmal, or again, remarkably periodical. Each variety has in its turn a rational means for relief, if its cause is but patiently sought. No symptom, probably, in any disease receives more perfunctory or rule-of-thumb therapy than this,[1] at least from others than specialists long skilled in its treatment. And yet by the simplest means the most complete and lasting benefits are often gained.

The types of cough are generally pretty well defined. Thus, in the earlier stages of the disease, most patients complain of the attack of coughing directly after getting out of bed in the morning. Here is where most practitioners err, in starting too soon their sedatives. In nearly every case, this morning clearing-up process, due probably to the change in posture, and to the change in temperature from bed to that of dressing-room, is beneficial. Unless inordinate, followed by exhaustion, or retching, which destroys all appetite for breakfast, this type may best be let alone. Where a moderate amount of secretion has collected over night, and the morning's paroxysm is unique in the twenty-four hours, it is wiser to follow the *laissez-faire* method and conserve the weapons of offense for later use. They are pretty sure to be needed.

Retching is often due to excessive pharyngeal mucus, which, hanging suspended, acts reflexly to set up vomiting. A simple gargle kept beside the bed, and used immediately on waking to cleanse the walls of the pharynx, will often clear up the condition entirely. This procedure worked remarkably well in an adult German woman in the tuberculosis ward of St. Luke's Hospital, who had coughing fits ending in vomiting every morning for months prior to her admission. Some such bland gargle as this may be used:

℞

	gm. or c.c.			
Ac. borici	30	00		ʒi
Phenolis		12		gr. ii
Glycerini	8	00	or	ʒii
Aq. rosæ	4	00		ʒi
Aq. dest. ad	240	00		ad ʒviii

M.

Sig.—Use half and half in tepid water as a gargle.

It is sometimes of advantage to have a comfortably warm dressing-room, into which the patient can step quickly before the temperature of the body, on getting out of bed, is too rapidly lowered.

Most of all, however, should be done through instruction. Mental suggestion may play a real part. The will to hold in check the cough often does more than a prescription. This is not easily inculcated in all the sick, and the end accomplished is often an excellent index of the team-work between doctor and patient. Carefully regulated breathing exercises, mild calisthenics, a series of deep, full inspirations, holding the breath several seconds, etc., are all useful aids.

In the constant dry, nagging cough which lasts off and on all day, a prolonged, systematic search should be made for local causes in the nares, pharynx and larynx. A long uvula is a prime offender.

This has often been carefully pointed out in the standard books, but is still curiously overlooked in many cases. Recently a negro presented himself for a constant cough and spitting of blood-streaked mucoid expectoration. He had a typical infiltration of the right apex; but the inordinate amount of sputum, always streaked with bright blood, demanded an explanation. He had been treated in two other dispensaries with small doses of morphin and absolute rest in bed, presumably under the notion that he was having a mild continued hemoptysis. He was found to have a long, edematous uvula which had irritated the epiglottis till it was twice the normal size. The lower pharynx, and upper larynx were deeply congested, and the sublingual tonsil was enormous. Amputation of the uvula gave him prompt relief, and checked the cough and amount of sputum briskly.

Large turbinates, adenoids, hypertrophied tonsils, and ulcers of the larynx, all demand local treatment. Occasionally cough appears to be due solely to fever. It leaves with the lowering of the temperature. Simple rest in bed generally turns the trick. Again, it is curious how much trouble a small patch of pleuritis can raise. Counter-irritation with mild (1 to 5 or 1 to 6) mustard plasters, repeated every four hours, or better still, strapping the chest for five or six days, is quite efficient. The actual cautery to the subclavicular region, a method formerly employed, is probably not used now by most practitioners; but in some cases it certainly has given relief in the past. The following has been suggested to check excessive secretion in the nasopharynx:

℞

	gm. or c.c.			
Iodini pur.	0	1 to 0	3	gr. 2 to 10
Potassii iodidi	1	0 to 3	0 or	gr. 15 to 45
Glycerini	10			ʒ 3

M. Sig.—Paint the nasopharynx every day or every other day.

1. Brown, L.: A System of Medicine (Osler), iii, 400.

Often no obvious local cause can be found which will account for the incessant, dry cough. Here again, suitable occupation and stimulation of mental interest should be tried. This can be carried out exceptionally well in sanatoriums or day camps. It is a matter of daily observation, let us say in the theater or lecture room, that as soon as the interest of the audience lags for a few moments, short irritable fusillades of coughing can be heard in all parts of the room. They disappear, as by magic, with renewed excitement or heightened interest. A similar phenomenon can be observed at any time when numbers of consumptives are sitting together. While a visitor or nurse reads aloud from an absorbing story there is complete and grateful quiet. This can be maintained ordinarily at will, by skilfully contriving to occupy the attention and imagination of the sick. It is no small task to keep renewing their flaccid energies, through diverse means of manual employment (puzzles, knitting, the jig-saw, sloyd, etc.).

Another distinct type of cough is that which occurs after eating. This is presumably due, reflexly, to the dilatation and sudden activities of the stomach walls. Its most obvious and most efficient means of control is in small, more frequent meals. The dietary should depend wholly on the general conditions present. But a more concentrated meal repeated as often as the digestion will stand, or the general needs seem to warrant, will obviate the seizure which in a large percentage of cases succeeds in setting up enough vomiting to remove most of the meal. In some cases the assumption of the upright posture for eating, after reclining all the morning, seems to be the cause. It is a good plan to have a tray taken to these patients, and the small meal eaten slowly, avoiding carefully any change in position. A little regulation will serve to keep the day's intake constant, and the calorific value need not suffer.

Sudden changes of temperature, such as that experienced on leaving a warm church or theater, often start vicious attacks of coughing. A slower progress and more careful gradation should be tried. Standing in the entry for a few moments and, protecting the face with a handkerchief until several full inspirations of cooler air are drawn, may prevent the attack.

Again, the local conditions of the patient's work must be looked into minutely. A glance over the records of any clinic will show (especially in the men's histories) a surprising number who have worked for a long time in some dusty pursuit. Of course this should cease, and new employment be found at once. But this change is not always (or indeed often) feasible. Yet through the cooperation of the social service departments and the bureaus for organized charity, a great deal of very real help may be obtained. This simple change in surroundings has been sufficient to produce genuine comfort in a good many cases.

There remain to be considered two other types of common cough, "depending sometimes on the amount of expectoration, sometimes on its quality."[2] Here drug therapy would seem to be clearly indicated. But one must even now approach the Pharmacopeia with caution. Austin Flint[3] taught that "expectorants have no place in the treatment of phthisis. An expectorant remedy that includes nauseants must do harm by interfering with alimentation and digestion. Cough palliatives, containing opiates are allowable only when the violence or frequency of cough causes fatigue and prevents sleep."

A number of methods are advocated to allay hypersecretion. Foremost, probably, stands the use of the perforated inhaler, suggested early in England by Sir W. Roberts of Manchester, and Dr. I. Burney Yeo,[4] and long championed in this country by Dr. Beverley Robinson. This simple apparatus is worn easily by patients, and with judicious periods of rest can be kept on most of the time. At night many wear it without annoyance. There is one real objection here, during the colder months. The warm expired air rapidly condenses and finally drenches the face and pillow repeatedly. This is a very genuine drawback to some, disturbing their rest, and it is far better then to discard the apparatus while sleeping. Its beneficial results are often striking. Recently in an adult, who had a rasping cough and profuse expectoration, the constant use of the inhaler over a period of only six weeks, practically eliminated the cough, greatly reduced the amount of sputum, and cleared the chest of all large, moist râles. He had the added benefit of rest at a day camp.

The principal drugs used on the inhaler are creosote or formaldehyd solution in some combination. The former is used at the Vanderbilt Clinic thus:

℞
Creosoti .....
Chloroformi ..
Spts. vini rect. āā p. æ. [i. e., equal parts of each].
M.

The latter is used in this combination:

℞

	gm. or c.c.		
Formaldehydi (40 per cent.)	1|00		♏ xv
Chloroformi	2|00		ʒss
Mentholi	0|30	or	gr. v
Ol. pini	0|75		♏ x
Spts. vini rect.	ad 15|00		ad ʒiv

M. Sig.—Use drops x on inhaler.

In Quincke's clinic, the attempt has been made to check excessive secretion by induced hyperemia. The foot of the bed is raised from 9 to 12 inches in the early morning, for two or three hours, and again at night. The patient lies flat on the back, the face turned toward the side.

Kuhn's suction mask[5] is still another means to a similar end. It is a device worn over the nose and mouth, like the perforated inhalers, so constructed by a series of valves that inspiration is forced and at a raised pressure (*Einatmungsbehinderung*), while expiration is accomplished naturally. This has been used by Kuhn, even in advanced cases with cavity formation, without accident. He is enthusiastic over the results.

Creosote, administered internally as recommended by Sommerbrodt, must be watched with great care. Its facility for upsetting the stomach is considerable.

Guaiacol (see Sahli's report)[6] has proved milder and safer. But in very few cases is it advisable at all to medicate much by mouth. The inhaler seems to serve every purpose.

Care must be taken not to dry up the secretions to a point where a thick and viscid sputum, almost incapable of being dislodged, makes miserable a patient who formerly enjoyed reasonable comfort. If this complication occurs, which, as pointed out by Hughes Bennett,[7] happens at times during the process of healing and of drying out a large cavity, a mixture containing the syrup of hydriodic acid may be used cautiously for a few days.

2. Fox, W.: A Treatise on the Diseases of the Lungs and Pleura. Edited by Coupland. 1st edition, 1891.
3. Flint, A.: Phthisis, p. 400, et seq.
4. Yeo, I. Burney: Lancet, London, clxxx, 4558, p. 16.
5. Kuhn, E.: Deutsch. med. Wchnschr., 1906, xxxii, 1486.
6. Sahli: Lancet, London, 1887, ii, 1287.
7. Bennett, H.: Reynolds' System of Medicine, iii, 585.

The nauseants (squills, senega, antimony, ipecac, etc.) may best be wholly discarded.

Preissnitz[8] recommends hot, wet compresses to the throat and neck.

Of the depressants, codein, heroin, and finally, morphin, given in dry, tabloid form upset the alimentary tract, taken all in all, less than when in some syrup-like combination. To codein is given the preference, as it tends less to constipation.

In the terminal, hopeless stage, free use of morphin seems imperative. The general discomfort and suffering otherwise, is appalling. An excellent combination suggested by Dr. H. S. Patterson is this:

℞

	gm. or c.c.		
Morph. sulph.	.005		gr. 1/12
Tinct. belladonnæ	30	or	♏ v
Ammon. chlorid.	30		gr. v
Aquæ dest. ad	4.00	ad	℥i

M. Sig.—Such a dose every four hours, if necessary.

Or this of Dr. S. W. Lambert:

℞

	gm. or c.c.		
Ext. opii			
Ext. Belladonnæ āā	12		gr. ii
Chloroformi	1.3		♏ xx
Syrup. tolutani	30	or	℥i
Aquæ dest.	120	ad	℥iv

M. Sig.—A teaspoonful every four hours, if necessary.

For a short time heroin (grs. 1/8 to 1/2) seems to work well; but its efficiency is short-lived, and in the very advanced cases soon must give way to morphin, which at last is the sole means of comfort, scant at best.

16 Central Park West.

MENINGISMUS FROM ACUTE CERVICAL ADENITIS AND PERITONSILLAR INFILTRATION

WILLIAM PEARCE COUES, M.D.
Surgeon to the Boston Dispensary
BOSTON

Some unusual features in this case, which so closely simulated some form of meningitis, make it of enough interest to report.

Patient.—A. L., a boy aged 4, was seen June 23, 1910.

Family History.—Father is living and well. Mother has pulmonary tuberculosis, now quiescent. The mother's tuberculosis was first diagnosed while she was nursing this child; she was fairly well advanced in the second stage at this time and undoubtedly had the disease when pregnant.

Personal History.—The patient was an only child and had always been well except for bowel upsets and slight tonsillitis in March. On May 17, a severe attack of coryza came on, and the boy was alternately better and worse for two weeks with more or less constant nasal discharge and slight cough. Then this trouble seemed to clear up and he was all right for a time. The mother had an attack of scarlet fever in May, and the child was exposed on May 6; the mother was promptly isolated. Three weeks after this exposure a slight transient erythema was noticed across the chest, of not more than two or three hours' duration. The boy felt perfectly well at this time. He had eaten fish for the first time in his life the day before this erythema was noticed. After the first week in June the cold which had been much better still persisted. On June 15, the cervical glands were swollen, bilaterally, more on the right than on the left. June 16, 17, 18, the glands were less swollen and the child seemed better at this time. June 19, there was stiffness of the neck on the right side. Temperature 99.6, the tongue coated and the throat clear.

Examination.—June 23, I first saw the boy. Examination showed him to be well developed and nourished. Examination of the heart and lungs revealed nothing abnormal. The throat showed chronically enlarged tonsils; it was perfectly clear, no membrane or exudate was visible. The teeth were good. There was bilateral cervical adenitis. The glands were the size of filberts and slightly larger, discreet, tender, not fluctuant; the skin over them was not reddened. Temperature was 101.2 F. The child felt languid.

Course of the Disease.—Next day, after a restless night, the temperature and pulse were normal. In the morning, the child was sleeping quietly and breathing easily. The glands were somewhat less tender. The condition gradually changed for the worse.

June 25: The child was more listless and weak. Examination showed the pupils equal and reacting to light. No Babinski or Kernig sign was present. Nothing abnormal was found in the examination of the lungs. Examination of the left ear showed the drum slightly reddened. Pulse was 120, temperature 100.2 F. The throat was clear; the tonsils were much enlarged, boggy and pale pink. Gradually the general condition grew much worse. The child's condition was much weaker despite stimulation with salt solution, whisky, caffein and small doses of digitalis.

June 26: The child was apathetic and stupid. The pulse was markedly irregular and somewhat intermittent and would drop suddenly from 120 to 80. The child answered questions only when aroused. Stiffness of the back of the neck was noticed for the first time. At 2 a. m. the condition was alarming. The breathing was stertorous and the child was markedly apathetic, the pulse being weak and irregular. The cervical glands had markedly increased in size. The nose seemed obstructed and the clinical picture resembled that seen in the last stages of nasal obstruction in diphtheria. The child was given antitoxin, though careful and repeated examination of the throat had shown nothing. The result of the cultures taken the day before had not been heard from. Later these cultures showed staphylococcus and streptococcus growth. The child was stimulated with brandy and salt solution and rallied from the acute collapse. The breathing was not quite so obstructed. There was a leukocytosis about 30,000.

In the afternoon, the condition was as follows: General condition about the same as before collapse of early morning, cervical glands markedly swollen, head and neck absolutely rigid, moved with body as a whole, like an iron rod, knees rigid, Kernig sign more marked (a suspicion at a previous examination). Examination of the throat showed a marked bulging shelf over the left tonsil. There was no exudation. Digital examination of the throat was unsatisfactory.

Consultants' Opinions.—The child was seen in consultation by two specialists in children's diseases, one of whom thought, with me, that the condition was tuberculous meningitis. The other thought that there was a possibility of the symptoms being due to the infiltration around the left tonsil and the markedly enlarged cervical glands. These glands had at no time showed fluctuation or softening. It was thought possible that there was pus around the tonsil, but expectant treatment was decided on for a while.

Termination of Case.—That night the child was somewhat better. Next day the shelf over the left tonsil had disappeared; the throat was more easily inspected, the right tonsil was very much enlarged and a condition similar to the shelf-like projection on the left side was present, only not so marked. This quickly subsided. From this time on, the improvement was rapid. The pulse became regular, stiffness of the neck gradually disappeared and the cervical glands became smaller. When the rigidity of the head and neck had almost subsided it was possible to feel enlarged cervical glands as far back as the occiput. Save for a slight irritability of the heart, the boy convalesced quickly, and this irritability soon subsided.

Remarks.—Some weeks after the boy was up and around, there was peeling of the palms of the hands. Desquamation was not noted in any other part of the body. The treatment consisted of digitalis, whiskey, salt solution and caffein. As

8. Preissnitz: Quoted by Cornil in Nothnagel's Practice: Tuberculosis, p. 609.

soon as possible the child was put out of doors for all day, with great benefit.

Two interesting points in regard to the case are: 1. Had the child recovered from a mild case of scarlet fever and were the glands sequelæ? None of those who saw the case believe this to be a fact. 2. The fact that the mother was tuberculous, and was undoubtedly so when pregnant with this child, influenced me to a great extent in arriving at a diagnosis of tuberculous meningitis. Dr. Hunter Dunn, one of the consultants, pointed out the possibility of the glands and throat being responsible for all the marked meningeal symptoms, which proved to be the case.

261 Beacon Street.

GOOD AND BAD CORSETS

GEORGE B. SOMERS, A.B., M.D.
SAN FRANCISCO

In preparing a paper on "The Use and Abuse of Corsets" read in the Lane Course of Popular Lectures at Cooper Medical College Feb. 10, 1911, I had the following diagrams drawn. They represent the chief points which seem to me characteristic of the good as contrasted with the bad corset.

While the diagrams are in themselves sufficiently explanatory, and afford a formula for judging the good and bad points of any corset, it may not be amiss to add a few words on the subject in general.

Every practicing physician recognizes the evils resulting from improperly worn or improperly shaped corsets and yet few take pains to investigate a patient's habits in this regard. I venture to say that still fewer have any fixed ideas as to what constitutes a good corset.

FUNDAMENTAL PRINCIPLES

In considering the basic principles on which a corset should be built, the method of support is of first importance.

In that region of the body covered by the corset, the pelvic bones and spinal column afford the best opportunities for rigid fixing of the framework.

At the hips, the space between the crest of the ilium and the prominence of the trochanter extended as a zone about the body, lends itself admirably to tight lacing, without danger of injuring internal organs. Lacing here affords a means of holding the corset firmly in place.

Along the back, following the contour of the spine, we may run a more or less rigid piece forming the rear elevation of the structure.

The strength and supporting properties of the corset rest in this back piece and in the hip zone.

To complete the skeleton framework, a front piece less rigid than the back, but straight, should run up as high as the bust. The other main points are sufficiently explained by the diagrams.

LACING

A separate short lace string should be inserted at the hip zone and this part firmly laced first when adjusting the corset. The upper part should be more loosely laced by one or two strings. Whether the corset should be front-laced or back-laced is not of great importance. Each method has its advantages and disadvantages. The choice should be left to the corset-maker, as the situation of the lacing involves problems in the mechanical construction of the corset. The back lacing allows of the simplest construction.

The good corset is shown in Figure 1:

1. It is fixed by lacing about the hips and holds its place entirely independently of garters or straps.
2. It supports the lower abdomen and reduces the hips.
3. It has a straight front.

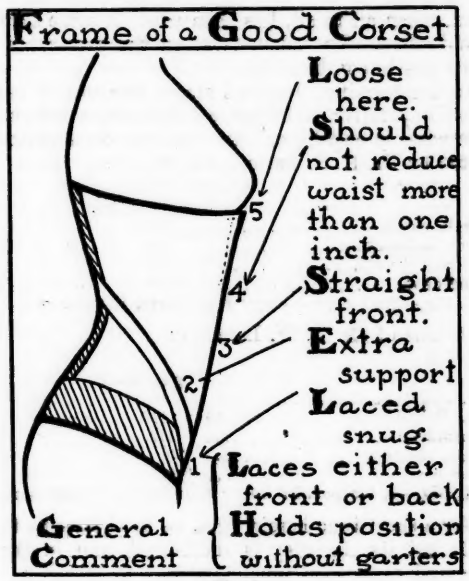


Fig. 1.

4. It is only form-fitting or loose about the waist and bust.
5. It diminishes the waist measure not more than one inch.
6. It laces from below upward by means of two or more lace strings.

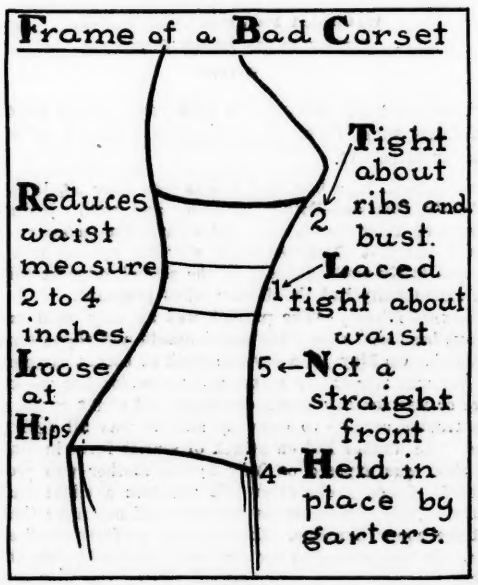


Fig. 2.

The bad corset is shown in Figure 2:

1. It shows the zone of greatest compression about the waist.
2. It is loose about the hips.

3. There is no provision for fixing it about the hips.
4. It is held down by garters or fixed by tight lacing in the upper portion.
5. It diminishes the waist measure from two to four inches.
6. It laces by a single lace.

In the selection of a corset the first consideration should be its conformance to the natural form. Secondly, the mechanical device for keeping the corset in place should depend on means which are not injurious. Finally, the corset should be comfortable without being sloppy. If it tends to produce the normal form it cannot do serious harm even if quite snug. Loose corsets are worse than no corsets. The worst corsets made are loose about the hips, giving them no true basis of support.

906 Butler Building.

A NEW CLAMP FOR END-TO-END INTESTINAL ANASTOMOSIS

C. E. TENNANT, M.D.
DENVER

The uncertainty of perfect approximation of the mesenteric border of the intestine has, no doubt, been the greatest objection to the suture method of end-to-end intestinal anastomosis. Because of the apprehensive postoperative period, the ingenious button device of Murphy has been largely superseded by the suture method of Connell.

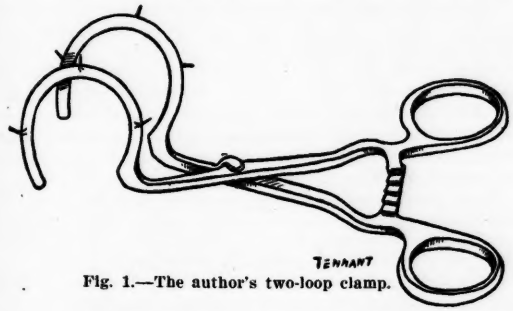


Fig. 1.—The author's two-loop clamp.

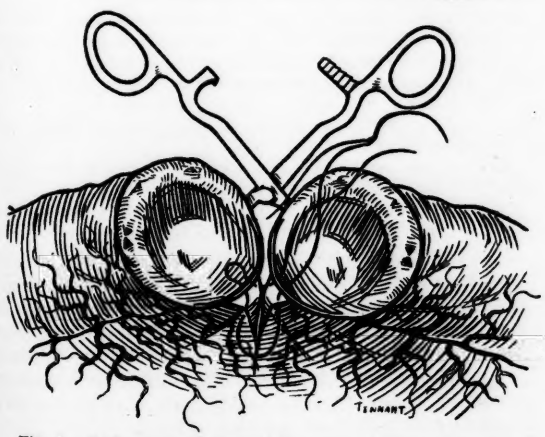


Fig. 2.—Ends of bowel grasped by loops. Mesenteric border very accessible.

The last-named method seems to have proved most satisfactory in side-to-side intestinal anastomosis. The objections to the end-to-end anastomosis are first, as stated above, the difficulty of securing perfect approximation of the mesenteric border, and second, the awkwardness of the method, necessitating as it does, considerable practice on the part of the surgeon before it can be successfully performed.

To work from the inside of such a cylindrical body as the intestine, closed with no free ends, is at first a serious mechanical difficulty. The object of the Connell method, as of all others, is of course to secure an inversion of the free ends of the intestine, thereby approximating the peritoneum. This is satisfactorily secured by the Connell method, but only after considerable practice.

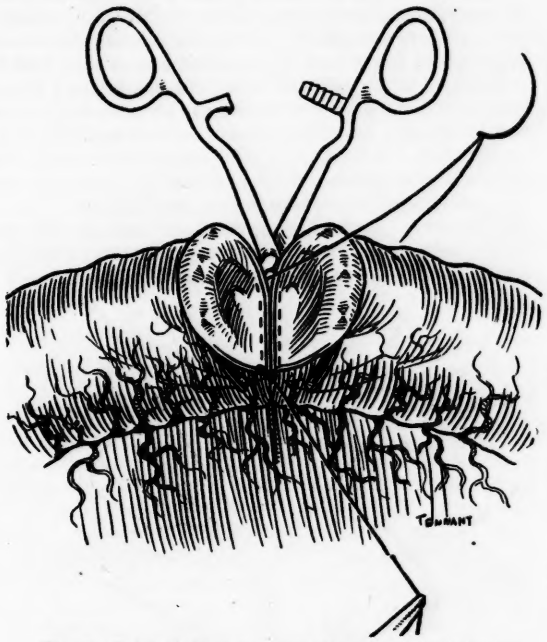


Fig. 3.—Suture half way up on each side of the intestine.

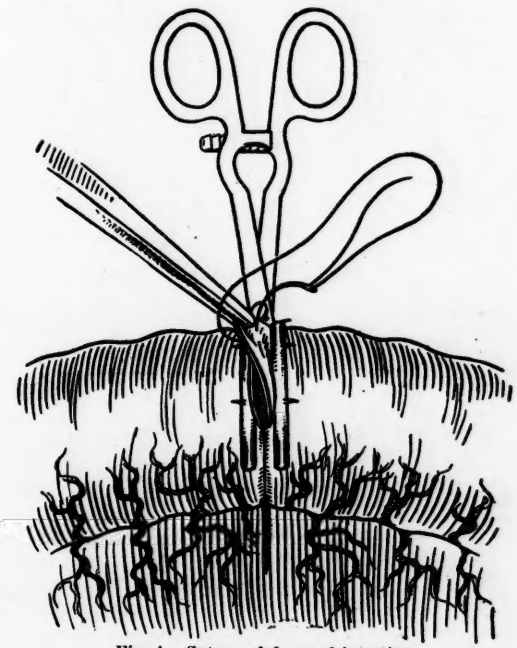


Fig. 4.—Suture of dome of intestine.

To simplify this method and, at the same time, to add to the security of the mesenteric approximation, I have devised the simple two-loop clamp here illustrated. (Fig. 1.) The clamp has a Collins lock, and is easily separated so that each end of the intestine may be engaged in its respective loop (Fig. 2), although the ends may at first be inches apart. The mere locking of the blades brings the ends of the intestine into close apposition with the mesenteric border well drawn up into the operating field. Before the clamp is completely closed, this mesenteric border is securely approximated by suture, and the continuous suture is then carried one-quarter way around each side (Fig. 3), commencing at the mesenteric border and continuing according to the Connell method.

The first tie is made at the mesenteric border with sufficient linen thread left at each end to continue around the intestine. The instrument being placed with its handles away from the operator, the suturing is continued well up on the side nearest the operator first, with the last suture entering the lumen of the intestine. The

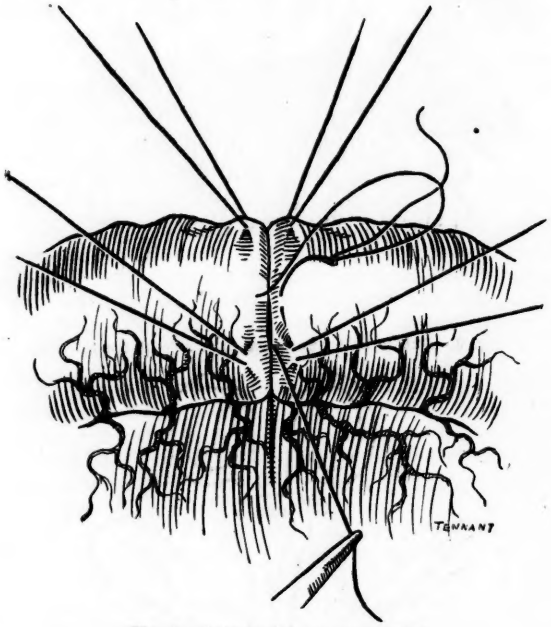


Fig. 5.—Introduction of guy stitches.

curved round needle is then transferred to the distal side of the intestine and the same Connell method is pursued as long as necessary.

As the dome of the intestine is reached, the suture is made to emerge on the outside (Fig. 4). The clamp is then either closed and the ends of the intestine freed from the retaining pins, or the clamp is removed altogether and guy stitches introduced about 1 cm. from the free edge, as illustrated (Fig. 5). These sutures when raised tend to invert the edges of the intestine.

A Cushing parallel deep suture, including all coats of the bowel, is then commenced; this is practically the Connell suture, only right side up, and consequently very much more readily introduced.

As the two ends of the suture meet, the last is made to enter the lumen of the bowel with the final stitch. Both ends are now together, and are accordingly threaded into the eye of the needle as in the Connell plan, and the knot tied inside the bowel. A few Lembert sutures may then be applied about the sites of the guy sutures (Fig. 5), or where the ends of the intestine were impaled on the pins of the clamp.

Criles' technic of end-to-end blood-vessel anastomosis first suggested this idea, and the recent report by Pollock and Spiedel[1] deserves mention in this connection.

612 Empire Building.

A CASE OF MENINGOCOCCUS SEPTICEMIA WITH DEMONSTRATION OF THE MENINGOCOCCUS IN THE BLOOD-SMEAR

A. WADSWORTH SKILTON, M.D.
Assistant Resident Physician, Mercy Hospital
BALTIMORE

Simon[2] reported a case of meningococcus septicemia in which the meningococcus was demonstrated in the blood-smear. Since then he has found the same conditions in a second case and he has told me that two or three other men have reported similar findings to him. So far as I have been able to ascertain, these are the only cases which have been observed up to the present time, and hence it may not be out of place to report briefly the following instance in which the same findings were observed.

Patient.—A boy aged 12, was in good health until February 24, when he complained of pain over the mastoid region on both sides with some swelling and tenderness.

General Examination.—The patient was first seen on February 27 by Dr. Beck. His pulse was 100; temperature 104 F. There was neither headache nor vomiting, but slight ptosis of the left eyelid and some rigidity of the muscles of the neck and the extremities were present. On lumbar puncture, 25 c.c. of turbid fluid escaped under pressure. Smears made from the centrifugalized spinal fluid showed the menigococcus in small numbers both free and enclosed in polynuclear neutrophilic leukocytes which constituted the cytological picture.

Blood Examination.—A blood specimen gave the total leukocyte count as 7,500, 85 per cent. of which were polynuclear neutrophilic leukocytes, 4 per cent. small mononuclear leukocytes, 11 per cent. large mononuclear leukocytes, while eosinophilic and mast cells were absent. Fully 1 per cent. of the leukocytes contained diplococci, the majority only one pair, but a few contained two pairs; the organisms occurred both in the mononuclear and polynuclear cells. Extracellular organisms were not seen, although they were present in Simon's case. The number of organisms calculated per cubic centimeter in this instance was 7,500. Simon calculated 7,500,000 per cubic centimeter in his case, one neutrophilic cell alone containing over 50 pairs of diplococci.

Many of the neutrophilic cells contained vacuoles which perhaps represent empty digestive vacuoles.

CONCLUSIONS

It is possible that the occurrence of the meningococcus in the leukocytes is much more common than is generally supposed, but owing to the relatively small number of cocci in the blood and the difficulty of finding them, they have no doubt been overlooked. The positive findings in the few cases which have been carefully examined indicate, however, that in doubtful cases careful search in this direction should not be neglected.

Character.—Men build on the rocks, not on the treetops. So do nations. America owes more to the cabin than to the palace; to the man with a calloused palm than to the man with a diamond stickpin.—*United Presbyterian.*

1. Surgery, Gynecology and Obstetrics, xi, 612.
2. Simon, C. E.: THE JOURNAL A. M. A., June 8, 1907, p. 1933.

VENOUS ANASTOMOSIS FOR CURE OF VARICOSE VEINS: VENOVENOSTOMY *

H. EDWARD CASTLE, M.D.
SAN FRANCISCO

In this paper is described briefly the technic of an operation devised by H. A. L. Ryfkogel and myself in these laboratories, and then practiced in the San Francisco Polyclinic and Post-Graduate School.

After working one year in the laboratory on the subject of vascular surgery, with comparatively uniform results, we felt that our technic was worthy of being put into practice in the clinic. Accordingly we performed Delbet's operation on several patients.

As Delbet's operation carries with it a certain amount of danger, by the possibility of thrombus formation in the femoral vein, we concluded to make an end-to-end anastomosis of a branch of the superficial femoral vein with the internal saphenous vein. By so doing, we obviate the danger from a thrombus, for if by error in technic one forms, it will be remote from the femoral vein.

The object of this operation is to reestablish a normal flow of blood in the internal saphenous vein, and in its tributaries. This is accomplished by changing the current of blood from the upper end of the saphenous vein into the superficial femoral vein. Thus the valves of the femoral vein are utilized to support the heavy column of blood which in the normal subject is supported by the valves of the saphenous. The lower part of the saphenous is relieved of all backward pressure from the inflow of blood into it from the superficial external pudic, superficial epigastric, superficial circumflex iliac, and other smaller tributaries. When this vast pressure is released the valves of the saphenous are often competent to sustain the remaining saphenous blood column.

The branch of the femoral vein that we are wont to make use of may be absent. If this should occur one has recourse to three other operations, viz., Delbet's, Trendelenburg's, or Ferguson's.

Delbet's operation, as is well known, consists of a terminal implantation of the proximal end of the distal fragment of the internal saphenous vein into the side of the superficial femoral vein. The operation is not difficult of execution for one skilled in vascular surgery, and is worthy of due consideration. Its chief fault lies in the possibility of a thrombus forming and occluding the lumen of the femoral vein.

Trendelenburg advises ligature of the saphenous in the upper part of the thigh.

Ferguson removes a section of the saphenous near its upper end and, after making a circular skin flap, removes the varicosed veins from the lower part of the thigh and those from the inner aspect of the leg.

The favorable results of venovenostomy depend almost entirely on asepsis and freedom from injury to the veins by mechanical, chemical, and thermal means. There is no danger of leakage in the suture line as the method employed is competent to obviate its occurrence.

The science of surgery is deeply indebted to Alexis Carrel, whose ingenious mind gave it this very efficient and simple technic, which is entirely adequate for any anastomosis of blood-vessels, whether it be arteries or veins, irrespective of size. At the same time, this technic is so uncomplicated and easy of execution that it can be utilized by any surgeon. The only special materials needed are China bead silk, No. 16 cambric needles, and weak clamps (tapes may be used in place of the clamps).

PREPARATION OF SUTURES

The manner in which the suture material is prepared is of vital import. We have tried many methods with much dissatisfaction, but now employ the one here described with entire safety and little inconvenience.

The needles are threaded with China bead silk as it comes from the market, or it may be split. Then the threaded sutures are sewed into a piece of gauze bandage. They are rolled so as to avoid bending the fine needles, and put into a wide-mouthed ounce bottle. The bottle is filled with warm petrolatum, and put into the autoclave for sterilization. When removed from the autoclave, the bottle is sealed with wax and so kept until needed. At the time of operation, the bottle is washed with pure liquor cresolis compositus. After the bottle has been washed free from all the antiseptic it is opened by sterile hands which are covered by gloves.

PREPARATION OF PATIENT

The evening prior to the operation the patient is given 2 ounces of castor oil, the leg is washed with soap and water from hip to knee, and covered with sterile gauze. One half hour before operation the patient is given $^1/_6$ grain of morphin sulphate and $^1/_{100}$ grain of atropin sulphate hypodermatically.

When the patient is on the operating table three coats of iodin are applied to the field of operation. Along the proposed line of the incision the iodin is removed with alcohol immediately preceding the beginning of the operation. Nitrous oxid and oxygen, or ether, is administered in the smallest amount that is sufficient to keep the patient quiet.

OPERATION

An incision 3 inches in length is made along the inner edge of the sartorius muscle and over the lower part of Scarpa's triangle. The linen is sewed to the skin at the edge of the wound with closely applied interrupted sutures, so as to avoid as nearly as possible any contamination from the skin, either chemical or bacterial. The wound is retracted inwardly and the internal saphenous vein immediately found lying buried in fat external to the fascia lata. It is freed from fat and adventitia. The vein is then ligated in the upper angle of the wound. Two inches distal to the ligature it is clamped with a Langenbeck serrefine, which clamp must have a soft spring, and the vein is severed with a sharp knife. We never employ scissors for cutting the vessels, on account of the crushing effect. The distal part is washed clear of all blood remaining in its lumen with Locke's solution, or normal salt solution. The vein is then heavily coated with petrolatum, and it is ready for anastomosing. The next step is to seek the branch of the femoral that is to be anastomosed to the saphenous.

By opening the fascia lata over Scarpa's triangle the internal cutaneous and long saphenous nerves are seen crossing the vessels from without inward. The crural branch of the genitocrural nerve lies in the sheath of the vessels, slightly external and anterior to the artery. The artery lies anterior to the vein, leaving only a slight margin of the latter to be seen on inspection. The vein is separated from the artery and a large branch is sought. When found it is ligated about 2 inches from the femoral vein. Then a Langenbeck serrefine is placed on the branch near the femoral vein. The branch is then cut about 2 inches from the femoral and treated as was the saphenous.

* From the Laboratories of Experimental Research, State University of California.

The distal end of the saphenous is then joined to the proximal end of the branch of the femoral in the following manner:

Three guy sutures are placed so as to unite the two veins, and so as to divide their circumference into three equal parts. When made taut, the circumference of the veins forms a triangle which has a guy suture at each angle. For descriptive purposes these guy sutures will be labelled I, J, and K. If traction is made on I and J by an assistant, the surface I J of the triangle will be brought anterior and made accessible for the introduction of the continuous suture which is to be used to unite the vessels permanently. If traction is at the same time made on K by a weight (we employ an artery clamp for this purpose) the sides of the vessels are drawn away from the surface that is being sutured, and thereby are prevented from becoming injured by the passing needle. These guy sutures have another function, viz., they elevate a slight collar at the margin of the vessels which is equal in depth to the distance they are placed from the free edge of the veins. This facilitates the introduction of the stitches of the permanent suture which is to be placed.

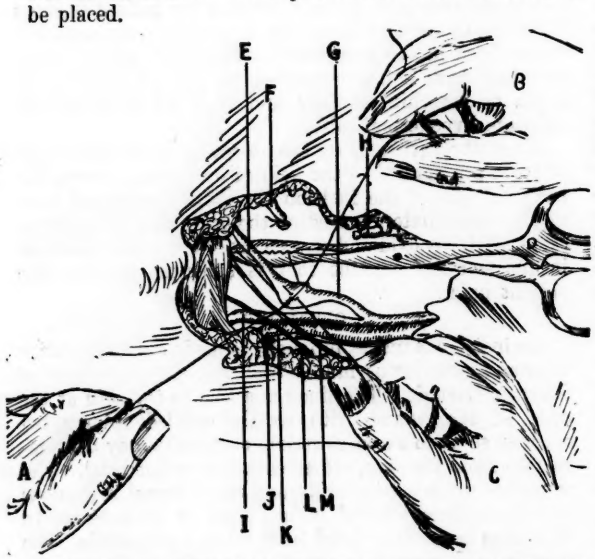


Diagram to illustrate the procedure of venous anastomosis for varicose veins: A and B, hands of assistant making traction on anterior guy sutures; C, hand of surgeon passing continuous suture; D, weight on posterior guy suture; E, distal end of saphenous vein; F, distal end of branch of femoral vein; G, proximal end of branch of femoral; H, proximal end of saphenous; I, femoral vein; J, femoral artery; K, crural branch of genitocrural nerve; L, internal cutaneous nerve; M, long saphenous nerve.

We now begin a continuous suture at guy suture I, including in the grasp of the stitch only the fine collar raised by the traction on the guy sutures, and placing the stitches as closely together as possible. This suture is responsible for the prevention of all leakage, therefore, it must be accurately applied. It passes through the entire walls of the vessels, and brings intima into contact with intima. It is important to avoid any adventitia being drawn into the lumen of the vessels, as blood is prone to clot when in contact with foreign tissues. This continuous suture is carried completely around the vessels and tied to its free end when the latter is reached. The assistant changes the weight and his hands to the proper guy sutures when the continuous suture reaches the consecutive angles of the triangle.

The anastomosis is thus completed and when the serrefines are removed the veins fill at once with blood. There is no bleeding if the suturing has been executed properly, but if there be a bleeding point an interrupted suture will suffice to stop it. The deep tissues are closely and carefully adjusted around the area of the anastomosis to avoid as much as possible any dead space, and sutured with No. 0 iodized catgut sutures. The sartorius is allowed to fall back into place, and the integument is closed with the fine artery needles.[1]

The patient is put into bed, and his leg kept elevated for two days; after this length of time he is permitted his freedom.

1820 Sutter Street.

RESUSCITATION BY CARDIAC MASSAGE

CHARLES H. FRAZIER, M.D.
PHILADELPHIA

Cardiac massage was first suggested by Schliff in 1874, but not until 1898 was it applied to man. Since then, and with each succeeding year, an increasing number of cases have been recorded with a fair measure of success.

This extraordinary power of the heart to resume its function after death under certain physical conditions is well known to the laboratory worker. I think that it was Kuliabko who first demonstrated that the isolated heart could be made to contract by injecting Locke's solution into it under pressure, and that too after the heart had remained in a frozen salt solution for a period of twenty-four hours. The essential factors for the resumption of the cardiac mechanism are the presence of a certain amount of fluid in the ventricles and the necessary pressure in the coronary arteries. In the laboratory, these factors may be provided by injecting into the carotid artery toward the heart normal saline solution charged with epinephrin. Spina of Prague obtained similar results by injecting 200 c.c. of saline solution into the veins of a dog; this forced the blood along before it and when the semilunar valves were reached the stream closed them and the blood was driven into the coronary arteries.

While these methods have proved successful in the lower animal they have not, so far as I know, been applied with equal success to the human subject. When, for one reason or another, the action of the heart has been arrested there remains but one practical method of resuscitation, namely cardiac massage. Although the majority of instances in which this procedure has been resorted to have been those of chloroform syncope, it has been recommended when the syncope is the result of drowning or asphyxia, and when due to the suspension of function from simple exhaustion or injury.

The following case recently came under my observation:

Patient.—R. T., male, aged 55, reg. No. 2840 (P. E. H.) was admitted to the hospital Oct. 3, 1910. The diagnosis was hydrocele. There was nothing of significance in his family or personal history. He was a moderate user of alcohol There was no lesion of the lungs and the heart sounds were clear, rhythmical and of good quality.

Operation.—The patient was prepared for operation for the radical cure of hydrocele. The anesthetic at the beginning was ether; difficulty was experienced in its administration, however, and as the patient had taken an unusual amount without the desired result, chloroform was substituted apparently with satisfactory results.

1. Wound Closure with Minimum Scar, THE JOURNAL A. M. A., April 24, 1909, p. 1333.

Collapse and Treatment.—The operation had just begun, the incision was made, when it was observed that the patient had become intensely cyanosed. In a moment he was pulseless and soon afterward respiration ceased. The head of the table was rapidly lowered and artificial respiration at once resorted to. Realizing the otherwise hopeless situation, the abdomen was rapidly opened and with one hand on the chest wall and the other against the diaphragm I massaged the heart at the rate of from 15 to 20 movements to the minute. The actual time was not recorded in the excitement of the moment, but in approximately 2 minutes feeble but irregular fibrillary contractions were felt. Gradually the impulses became more forcible and more regular, and after an interval of 8 minutes, during which time massage was continued, resuscitation seemed assured. At this time the pulse-rate registered 130.

Result.—The abdominal wound was closed, the operation on the hydrocele completed and the patient returned to the ward. The subsequent history was uneventful.

In a series of forty-six cases, reports of which are collected by Cockovic,[1] in seventeen the results were classified as positive and in twenty-nine as negative. Of the former, in only nine was the effect permanent; in the other patients survived for from five to twenty-seven hours. Thus there was only 20 per cent. of successes.

Perhaps the most important practical consideration is the method of procedure. Shall the heart be massaged directly through a thoracoplastic opening, by the transdiaphragmatic or by the subdiaphragmatic route? Dismissing any theoretical considerations, we find the best results are obtained by the subdiaphragmatic route. In sixteen instances of the latter there were ten positive results, in twenty-four of the thoracic route only seven; and in the six cases by transdiaphragmatic route there were no resuscitations.

The following table[2] shows the relative value of the various methods:

	Successful.	Partially Successful.	Failures.	Total.
Direct	2	8	18	28
Transdiaphragmatic	0	1	2	3
Subdiaphragmatic	8	5	6	19
Total	10	14	26	50

Because of its greater simplicity and higher percentage of recoveries the subdiaphragmatic route should be adopted as the conventional procedure, except perhaps in children in whom the elasticity of the chest wall enables one to make adequate pressure on the heart without opening either chest or abdomen. How long one is justified in waiting before resorting to massage may be judged from the fact that there have been no recoveries when the syncope has been of more than ten minutes' duration; and the largest measure of success was obtained when the interval did not exceed five minutes. The sooner the massage is begun, therefore, the brighter the prospects. As the proper oxygenation of the blood is indispensable to resuscitation, artificial respiration should at the same time be practiced, or direct insufflation by the Auer-Meltzer method.

In a case reported by Rehn,[3] failing to resuscitate the patient by subdiaphragmatic massage and Sylvester's method of artificial respiration, he opened the diaphragm, practiced direct massage, and at the same time established positive pressure with the Brauer apparatus. The result was almost instantaneous on both heart and respiration. In two hours the respirations failed again and further attempts at resuscitation were ineffectual. The secondary collapse was attributed by Rehn to a pneumothorax, which developed when the pleura was torn in opening the diaphragm.

1. Cockovic: Arch. f. klin. Chir., lxxxviii, No. 4, p. 917.
2. Progressiva Medicine, March, 1911.
3. Rehn: München. med. Wchnschr., Nov. 30, 1909.

NOMA (CANCRUM ORIS) IN AN ADULT, WITH REPORT OF A CASE

HOWARD D. KING, M.D.

NEW ORLEANS

Noma in the aged is of such unusual infrequency, compared with its occurrence in children, that I am induced to record a case which came under my observation in the summer of 1910. Considering the rarity of the condition as well as the scarcity of the literature dealing with the disease, especially as relates to its presence in the aged, I believe that I am justified in offering a brief account of the nature of noma.

Noma is a rapidly progressive and probably specific infectious process of a gangrenous type, causing extensive tissue destruction and usually having its origin on the mucous membrane of the vulva, gum or cheeks, and sometimes, though seldom, the ear or anus. Noma affecting the region of the cheeks or gums is known as cancrum oris; involvement of the vulva is termed noma pudendi.

Children between the ages of 3 and 8 years are most frequently attacked; the disease occurs more frequently in girls than in boys. This sexual predisposition continues throughout life and is not due to any peculiar susceptibility, but to the fact that the female genitalia offer a more suitable field for infection. Text-books on pediatrics are almost unanimous in declaring the condition to be one essentially of childhood and that the disease is not seen in nurslings or adults. That this impression is somewhat erroneous will be seen from the case reports below.

Between the years 1848 and 1903, an interval of fifty-five years, several cases in the aged have been recorded in medical literature. Tourdes[1] 1848, reported nine authors who had seen noma in persons between 15 and 72 years of age; von Bruns[2] 1859, from 413 cases collected by him, found only eleven in persons whose ages ranged between 15 and 70; Strueh[3] 1872, reports a case of his own in a patient aged 30, and calls attention to a case observed by Vogel in a youth of 18; Hildebrand[4] 1873, collected a series of cases numbering twenty-two in persons over 15 years of age; Brydon[5] 1882, one case; Herman[6] 1883, one case; Murillo[7] 1886, one case; Herff[8] 1890, one case; Masterman[9] 1891, two cases; Koster[10] 1892, one case; Stephenson[11] 1892, seven cases; Ziegler[12] 1892, one case; Le Count[13] 1898, one case; Mangubi[14] 1898, one case; Zusch[15] 1901, one case; and Reale[16] 1903, one case.

Poorly nourished, cachectic subjects and those living under vitiated environments are said to be the types most frequently affected. That filth, squalor and tenement life are not alone responsible for the disease

1. Tourdes: Thèse de Strassburg, 1848.
2. Von Bruns, V.: Handbuch der practischen Chirurgie, I, Part 2.
3. Strueh: Inaugural Dissertation, Gottingen, 1872.
4. Hildebrand: Quoted by Ziegler, *vide* reference 12.
5. Brydon: Brit. Med. Jour., 1882, p. 838.
6. Herman: Trans. Obst. Soc., Lond., 1883, xxv, 141.
7. Murillo: Noma (*a proposita de un caso en un adulto.*) Rev. med. de Chile, Sant de Chile, 1886-87, p. 312.
8. Herrf: Deutsche med. Wchnschr., 1890, xvi, 949.
9. Masterman: Two Cases of Spreading Gangrene Around the Mouth Occurring in Adults, St. Bartholomew's Hosp. Rep., London, 1891, xxvii, 2055.
10. Koster: Ett fall af noma hos 44-arigivinna, Förh., Gotesborg Läk. Sällsk., 1892, p. 74.
11. Stephenson. Cancrum Oris in Adult Life, Brit. Guiana Med. Ann., Demerara, 1892, p. 127.
12. Ziegler: München. med. Wchnschr., 1892, xxxix, 107.
13. Le Count: Tr. Chicago Path. Soc., 1898, iii, 180.
14. Mangubi: Sluchai nomi u. vzroslavo. Vrach.: zapiski, Mosk., 1898, v, 18.
15. Zusch: Ein Fall von Noma mit ausgedehnter Soorbildung in hohen Alter, München. med. Wchnschr., 1901, xvii, 785.
16. Reale: Un caso di noma in adulto. Policlinico, Rome, 1903, ix, 1431.

has been conclusively demonstrated in more than one instance, especially in the epidemic of noma which occurred in an orphanage at Albany, N. Y., where good practical sanitary, hygienic and dietetic conditions prevailed. It also occurs very frequently as a complication of the exanthemata, notably measles.

In the above-mentioned cases of noma the underlying conditions have been most varied. Thus, we see the disease, according to the case reports, following erysipelas, typhoid fever, amebic dysentery, pleuritis and nephritis. Stephenson[11] regards renal disease as an important factor in the causation of cancrum oris in the aged.

The exact status of the disease as to etiology has not been definitely established and is further rendered confusing by the multiplicity of the terms used in the description of the malady. Noma, at all events, is a rare condition, but its assumed rarity was very probably due to the difficulty experienced in recognizing an exact causative organism. At the present time, even, it is by no means certain that the organisms described by investigators of the past have anything to do with the disease. The frequent use of the term "noma" synonymously with "gangrenous stomatitis" is to be regretted, as the latter term is purely a generic one and of no precise significance, nor does it furnish us with any adequate idea of the existing pathologic condition. The following terms have been used and are to-day employed to describe noma: gangrenous stomatitis, gangrena oris, gangrenopsis, stomato-necrosis, necrosis infantilis, buccal anthrax, water canker, cancer aquaticus, and sloughing phagedena. *Wasserkrebs*, a term originally coined by A. Richter in 1828, in his initial treatise on noma, is the name given the disease by the Germans. The French use the phrase *gangrène de la bouche*. The foregoing terms are a source of confusion and of no importance save from a symptomatic standpoint.

Reverting to the etiology of the disease, it was once believed to be the manifestation of some neural disturbance, owing to the almost invariable occurrence of the disease in a certain part of the cheek. Whether the disease is some form of mycotic necrosis, as first claimed by Froriep[17] or of bacterial origin, is still an open question. Lingard[18] found in the tissues long, thread-like growths, the individual threads being composed of small bacilli. He reported also finding a bacillus similar to the above in a calf suffering from what was apparently cancrum oris. Ranke[19] found in noma tissues certain cocci, the specific nature of which have never been recognized. As a result of his findings, Ranke concluded that different forms of gangrene resulting from noma unquestionably occur in children who have a tendency to disease of this character; i. e., without infection from contact.

The endemicity of the malady in public institutions coupled with the seeming choice of the disease for localization on the mucous membrane of the different openings of the body suggest that the causation may be looked for in the invasion from without of microorganisms. Schimmelbusch,[20] as a result of his bacteriologic study of one case, found bacilli often in shortened pairs and sometimes in long filaments.

An extremely good digest of the subject of noma is given by Blumer and McFarlane,[21] who have reported a series of sixteen cases occurring in epidemic form which they accepted as undoubted noma. As a result of their investigations, they concluded that the disease began as a simple infection and terminated in a mixed infection, and that the mixed infection was not always due to the same organism, but was usually due to a long organism of a leptothrix type. In a most elaborate and highly interesting treatise on noma by Weaver and Tunnicliffe[22] is incorporated the results of the bacteriologic researches concerning noma as undertaken by Grawitz, Bartels, Guizetti, Babes, Zambilovici, Foote, Nikolaysen, Schmidt, Petruschky, Freymuth, Saft, Krahn, Seiffert, Perthes, Braun, Matzenauer, Elder, Ranke, Rosenberger, Brunning, Rona, Buday, Pollard, Herrman, Passini and Leiner, Walsh, Sailer, Strueh, Schimmelbusch, Longo, Hofmann, and Kuster. In the majority of the cases of the above observers the superficial parts of the slough showed mixed cultures; in the deeper parts, the sections often showed almost a pure growth. The organisms most frequently found were slim, thread-like bacteria, decolorizing rather easily by Gram and not growing on ordinary media.

REPORT OF CASE

History.—June 4, 1910, I first saw Mrs. E. M. F., a housewife, aged 59, whose family history was of no material value. The patient was the mother of eight children; had one miscarriage; menstruated at 14; climacteric reached at the age of 43 without any untoward results. For the last eighteen or twenty years previously the patient had had very poor health, being almost constantly ill with gastric and intestinal disturbances. As the patient tersely stated it: "All my life I have been a sufferer from loose bowels and heartburn." Within the past five years the patient has been afflicted with articular rheumatism. Queries as to previous treatment revealed the fact that during the previous five months the patient, at seven different intervals, had taken large amounts of calomel in broken doses. She declared that her former physician advised her when feeling unwell to take a dose of calomel. A daughter of the patient aptly termed her mother a "calomel fiend."

Examination.—Patient looked at least ten years older than she really was. She was wrinkled and emaciated, and bore all the earmarks of a woman who had had a strenuous struggle with life. Evidences of insufficient nourishment and hard work were most striking; personal hygiene very bad; living environments wretched. On going over the patient very thoroughly I found that I had to deal with a chronic interstitial nephritic condition, complicated with endocarditis.

Treatment and Course of Disease.—As it was apparent that the patient's span of life was drawing to a close, only simple palliative measures were resorted to. Under this mode of treatment the patient maintained her balance for a fortnight, when early on the morning of the fifteenth day of her illness my attention was directed to a slight swelling on the left side of the face. Examination of the mouth revealed an ulcerated patch on the mucous membrane of the gum covering the outer aspect of the mandible. The teeth were carious and disgustingly dirty; the lower teeth were artificial; there was a limited amount of exudation. The odor was most fetid. I prescribed an oral antiseptic and promised to call again the same evening.

On my second visit the swelling had increased and had extended more to the middle line. There had been a slight hemorrhage at this time and the exudation had increased. Within the short space of seven hours the ulcerative process had become a dark and dusky red, which was soon followed by a circumscribed area of dead exudate. There was also a slight sloughing which the patient was trying, in vain, to expectorate. It was at this juncture that Dr. Stephen W. Stafford kindly consented to see the patient with me. As a result of his examination, he concurred in my diagnosis and immediately pronounced the condition cancrum oris. The disease was now spreading rapidly and there was a well-marked line of sloughing tissues following the imprint of a set of

17. Froriep: Chirurgische. Kupfertafeln, 1844, p. 458.
18. Lingard: Lancet, London, 1888, ii.
19. Ranke: Zur Aetiologie und pathologischen Anatomie des nomatosen Brandes, Jahrb. f. Kinderh., Leipsic, 1888, xxvii, 309.
20. Schimmelbusch: Deutsche med. Wchnschr., 1889, xv, 516.
21. Blumer and McFarlane: Am. Jour. Med. Sc., xxii, 527.
22. Weaver and Tunnicliffe: Jour. Infect. Dis., 1907, iv, 8.

false (lower) teeth. The frenum of the lower lip soon became involved and it seemed that that portion of the mouth between the outer mucous membrane of the alveolar process and the inner side of the cheek was literally rotting away. The odor at this time had become so bad that it appeared to invade the whole household. It was most disgusting and the deodorants employed proved of little value.

On the morning of the third day the frenum of the lower lip began to split from within outward and the whole of the inner aspect of the mucous membrane of the left cheek was one black, greenish and garnet mass, attended with a slight hemorrhage. The tongue was swollen beyond its natural size and deglutition was very difficult. Speech was painful and required great effort.

Later the same day the tissue destruction had progressed to such an extent that the inner angle of the cheek began to break down. The patient's condition at this time was most serious and death was but a question of a few hours. There was profound prostration, feeble pulse and retention of urine. The patient's condition rapidly grew worse, she soon went into a typhoid state and died that night at 11 o'clock. Only twice during her illnes did the temperature go beyond 100 F.

June 21, tissue scrapings and oral secretions were submitted for bacteriologic study to Dr. William H. Seeman, who made the following report:

Slide 1.—Leishman (Romanowsky) staining. *Spirochæta dentium* present in considerable numbers. Great quantities of pus cocci. Organism of a leptothrix type plainly discernible. Fusiform bacilli present, but not to any marked extent.

Slide 2.—Weak carbol-fuchsin staining. Innumerable spirochetes easily demonstrable. Bacilli also present which seem to be the early stage of some form of spirillum. In no way does the latter resemble Vincent's spirilla.

Anaerobic culture yielded practically negative results. Pus cocci and non-pathogenic bacilli found. The culture failed to show any thread-like organisms.

It was fortunate that during the above examination Dr. Seeman had at the same time submitted to him secretions from a case of Vincent's angina and he made comparative examinations between the specimens of the two cases. As a result of this comparative bacteriologic study, Dr. Seeman was able to determine very distinctly the morphologic and cultural differences between the causal organism of Vincent's angina and the organism which probably causes noma. The essential difficulty of recognizing a certain and definite causative organism is usually obscured by the great number of bacilli of uncertain character which are always found in nomatous tissue. Moreover, it must be noted that in the mouth of the normally healthy person bacteria are always present in large numbers and the following have been found: *Spirochæta dentium, Spirillum sputigenum, Bacillus buccalis maximus, Iodococcus vaginatus,*[23] *Leptothrix buccalis innominata* and the *Leptothrix buccalis maxima.* In all likelihood, they are non-pathogenic. The existence of dental caries always proves a most favorable nidus for microorganisms. Aside from this, it is interesting to note that the following pathogenic microorganisms may also be present in the mouth under apparently normal conditions: the *Diplococcus pneumoniæ, Diplococcus lanceolatus, Micrococcus septicæmia sputi, Streptococcus pyogenes, Micrococcus tetragenus, Bacillus crassus sputigenes,* and the *Bacillus coli communis.*

From a consideration of the case just recorded it is possible to obtain a clinical picture of the disease. The diagnosis does not present difficulties when the disease is well established. However, noma, when affecting the genitalia, might be mistaken for ulcerating granuloma of the pudenda. The symptoms are similar in some respects to those encountered in infectious submaxillary angina (Ludwig's). In fact, in many cases it is impossible on clinical grounds alone to distinguish angina from noma. Ludwig's angina differs from noma in that it displays more of a tendency to destroy loose tissues and avoid the denser ones. It often happens that Ludwig's angina terminates in gangrene.

The symptoms produced by noma in the aged do not differ materially from those seen in childhood. It can be readily seen that the predisposing factor in the foregoing case was a frail human economy whose vital powers were lowered by chronic renal and cardiac disease, to which were added insufficient nourishment and vitiated environments. It may be asked if the heavy calomel medication just prior to the last illness may not have played its part in aiding the condition. While it is possible that there may have been a condition bordering on mercurialism, it must be borne in mind, says Reisman,[24] that mercury as a causative factor in this condition has been absolutely disproved, quoting Coates[25] in support of this view. Dr. Benjamin Rush[26] cites an instance in which a colleague of his, Dr. Stewart, was in the habit of giving 20 grains of calomel three or four times a day and continuing this as routine treatment for five or six days without any ill effects. It is to this same Dr. Stewart that modern syphilographers owe the idea of mercury medication by inunction, as he was the first to compel patients to wear socks containing mercurial ointment in the treatment of luetic conditions. Dr. Stafford, who saw the case in consultation, also rejects the idea of calomel medication having anything to do with the production of the disease.

The condition of the patient at all times precluded the possibility of ever doing anything except to institute palliative measures. The drastic treatment so necessary for a cure in these cases was entirely out of the question.

CONCLUSIONS

1. Noma does exist in the aged, but its occurrence is remarkably rare.

2. Noma in the aged does not differ materially from the disease as seen in childhood. The supposed predilection of this malady for the female sex is due alone to the fact that the female genitalia offer a more suitable field for infection.

3. No certain and definite organism has been definitely established as the causative factor; the indictment of the long, thread-like bacillus, so frequently regarded as the cause of the disease, is on purely conjectural grounds. While in the realms of the hypothetic metabolic retrogression brought about through previous illness, vitiated environment and bad hygienic conditions may effect a change in the pathogenicity of the previously harmless microorganisms of the mouth to such an extent as to cause an overwhelming of the tissues of the cheeks and jaws, and thus produce gangrene and a condition of general sepsis.

4. Infectious submaxillary angina may be the forerunner of noma, and once the gangrene arises it would be difficult, indeed, to say whether the condition was due to Ludwig's angina or noma. This, too, despite bacteriologic observations, as it is more than probable that the two conditions could be coexistent. It is highly probable that noma is a process caused by more than one type of organism.

602 Perrin Building.

23. *Iodococcus vaginatus* (Miller) is found in unclean mouths; gives a peculiar reaction with iodin, the sheath being stained yellow, the cocci dark blue.

24. Reisman: Osler's Modern Medicine, ed. 5, 48.
25. Coates North American Med. and Surg. Jour., ii, 1826.
26. Rush, Benjamin: Medical Inquiries and Observations, 1815, iii, 23-4, Philadelphia.

XUM

THE CHEMISTRY OF NEPHRITIS *

HOWARD T. KARSNER, M.D.
Demonstrator of Pathology, University of Pennsylvania
PHILADELPHIA

The purpose of this paper is to present, as concisely as is consistent with clearness, the chief points in the chemical changes which occur in an organism suffering with nephritis. The aim is to confine the remarks to those non-suppurative forms of nephritis, which are termed Bright's disease, rather than the various suppurative or other focal lesions due to localization of bacteria. If, throughout the paper, many of the statements seem dogmatic, the necessity for brevity must be held accountable. Lengthy argument would only seem to render less clear a subject which, at best, is but in its developmental stages. The point of view presented is taken to represent that which is most modern and most widely accepted.

It is proposed to take up the subject in this sequence:

I. Review of normal metabolism of proteins, fats, carbohydrates and salts, in reference to excretion of intermediate and end-products by the kidneys.

II. Metabolism, excretion and retention in (a) acute nephritis, (b), chronic nephritis of interstitial and parenchymatous varieties.

III. Metabolism, excretion and retention in nephritis with uremia, with a consideration of the theory of internal secretion.

IV. Metabolism, excretion and retention in nephritis with edema.

V. The relation of chemistry to vascular hypertension and cardiac hypertrophy.

I. NORMAL METABOLISM OF PROTEINS, FATS, CARBOHYDRATES AND SALTS

The foods ingested are in the form of proteins, fats, carbohydrates, inorganic salts and water. The end-products of fats and carbohydrates are carbon dioxid and water, the former excreted chiefly through the lungs, the latter through lungs, skin, intestine and kidney. If for some reason the metabolism of the carbohydrates is incomplete, the intermediate products can be excreted by the kidney for a long time with little disturbance in this organ, as may be seen in diabetes. Late in the course of this disease one often sees a large, pallid kidney which, however, may possibly be caused by other factors than the mere excretion of glucose, beta-oxybutyric and diacetic acids. In the case of fats the intermediate products, and even the emulsified fat itself, as in cases of lipemia and lipuria, may be excreted without apparent influence on the kidney. Inorganic salts and water apparently pass through the organ with no difficulty in health. The end-products of protein metabolism, urea, carbon dioxid plus water, also are eliminated with no difficulty, but in those diseases in which the necessity for the elimination of intermediate products appears, the universal incidence of some form of chronic nephritis would seem to indicate that these bodies, the purins, ammonia, carbamic acid and uric acid, have a distinct irritative effect on the kidney.

It is believed to-day that urine depends for its water and inorganic salts on the activity of the glomerules, and for its organic constituents on the activity of the epithelial cells of the tubules; but the nature of the changes in the materials passing through the epithelium has been incompletely studied and is vaguely understood. It is known, however, that the epithelium has synthetic power, as is seen in the building up of hippuric acid from benzoic acid, the latter a metabolite of intestinal putrefaction. Anabolic activity is evidenced in the formation of creatinin from creatin. Aside from this meager information the chemical changes in the kidney itself form a chapter for investigation that can only be opened with newer and more exact methods of experimentation and observation.

II. METABOLISM, EXCRETION AND RETENTION IN ACUTE NEPHRITIS AND CHRONIC INTERSTITIAL AND CHRONIC PARENCHYMATOUS NEPHRITIS

In nephritis the elimination of the end products of metabolism has been studied extensively with the idea of learning to what degree the disease may cause retention of final or intermediate products and what influence the disease may have on metabolism in general, either directly or through the retention of injurious metabolites.

For the purposes of this paper it is sufficient to classify nephritis as acute, chronic interstitial and chronic parenchymatous.

In the course of acute nephritis the retention of the products of protein metabolism, as shown by the determination of the total quantity of nitrogen eliminated, in relation to the total nitrogen ingested, usually is very considerable. This is especially evident in the earlier stages of the disease when the total excretion of urine is almost *nil*. Later in the disease, however, as the amount of urine increases, the output of nitrogen increases and may be relatively excessive for several days, apparently in the attempt to get rid of that stored up in the organism during the preceding period of depressed excretion.

A very important feature, that of sodium chlorid excretion, which will be discussed more fully in connection with edema, may be dismissed at this point with the statement that in a general way in acute nephritis it parallels that of nitrogen. Exceptional cases have been described in which the ability to excrete sodium chlorid was very much less than the ability to excrete nitrogen, and, indeed, any other urinary constituent, even including water. Experimentally it has been found that in those forms of nephritis in which the tubules especially are affected, the nitrogen output is diminished, whereas this is not the case where the glomeruli are affected almost to the exclusion of tubular disease.

In the chronic nephritis of both interstitial and parenchymatous forms the nitrogen elimination is variable. For periods of days and even weeks there may be well-marked retention of nitrogen amounting to as much as 4 gm. a day, but this cannot persist for a great length of time and usually is followed by a period in which the elimination of the retained nitrogen becomes evident in an amount of urinary nitrogen far in excess of the intake. This relation is not peculiar to the one form of chronic nephritis rather than the other, nor does prolonged retention necessarily excite uremic attacks. Particular kinds of diet have little influence on the condition; nor does the amount of water ingested give rise to considerable differences in the nitrogen excretion. Up to the present time these striking variations in nitrogenous output cannot be definitely explained. Attempts are being made to differentiate chronic parenchymatous and interstitial nephritis by the use of phenolsulphonephthalein but the work at the present time is insufficiently controlled by autopsy findings and is not to be accepted as final.

* Presented before the County Medical Society of Philadelphia as part of a Symposium on Nephritis, March 8, 1911.

Before discussing the chemistry of the accidents or complications of nephritis it may be well to briefly consider the variations in the normal constituents of the urine caused by the nephritic process and to consider the elements new to the urine as a result of the disease.

It is but natural to expect that the amount of urea in the urine of nephritics is subject to the same variations as have been indicated in discussing nitrogen. Not only do the amounts of urea and nitrogen excretion parallel one another, but in addition the amount of ammonia follows the same curve. Most recent observations lead to the belief that much of the ammonia in the urine, either normal or pathologic, is the result of decomposition; but urine preserved under uniform conditions would show variations in ammonia dependent largely on the variations in the amount of urea. Uric acid and the purins show very much less variation than the urea, although occasional cases occur in which retention of uric acid occurs; in such cases, however, the retention of urea is considerably greater than that of the uric acid. Under normal conditions the amount of creatinin in the urine is quite constant. In nephritis, however, it is said to be subject to considerable variation, but the question is one that is by no means settled. The most important feature in connection with this phase of the subject is that the older theory holding creatinin retention to be the cause of uremia has been abandoned. In the same way, the question of the amount of hippuric acid in the urine is unsettled.

Turning to the inorganic salts, we find that phosphates and sulphates are retained and eliminated in amounts parallel to that of nitrogen. This is not true, however, as regards the chlorids for, although numerous cases can be found in which the chlorid output is fully equal to that of the normal patient, yet in other cases considerable deviations from the normal may occur. These deviations may be of three types: (1) a marked daily variation, even with a uniform diet; (2) a marked excess of chlorid output, in which case the patient is usually one recovering from a period of retention, such as might be seen in an acute or subacute attack of nephritis or in patients with a disappearing edema; (3) a notable retention of chlorids. In the last group some instances are those of more or less permanent disability to excrete chlorids on the part of the kidney, a condition not especially relieved by dietary restriction; whilst, on the other hand, some instances represent a temporary embarrassment of the kidney, due to relative or absolute excess of chlorids in the diet, a condition which is relieved by diminishing the dietary chlorid intake for a short period, during which time the organ often regains its normal power of chlorid excretion.

Of great importance in connection with the variations in these normal urinary constituents is the excretion of water by the kidney. The bearing that this has on the chemistry of the organ is that excesses of water excretion aid in excretion of solids, and diminution of water excretion hinders the output of solids. The question of water excretion in this connection, however, seems more that of the physiologist than of the chemist.

Of the abnormal constituents of the nephritic urine, albumin is of most importance and interest. The albumins found are especially serum-albumin, serum-globulin and nucleoprotein. In dietary excesses in the presence of a normal kidney the albumin found in the urine is that which has been ingested. In kidney disease the same phenomenon, with but slight modification, may be observed. The identity of these proteins has been proved by the precipitin test. The serum albumin is almost always found associated with globulin in the urine and various attempts have been made to attach diagnostic importance to the relation between the two. This has failed, however, except possibly in the case of amyloid kidney, in which the amount of globulin is said to exceed that of the serum-albumin. It has also been claimed that in cases of cyclic albuminuria the albumin present is largely in the form of a protein, very much like, or identical with, one of the serum-globulin fractions. Nucleoprotein is of especial significance in connection with acute nephritis and fever cases. Albumose has no direct bearing on nephritis and when present in this disease represents a hydration of the urinary albumin present as a result of the disease. Why the kidney is impervious to the serum-proteins in health and pervious to them in nephritis remains an open question. Nor is it helped by the reflection that cell-proteins (e. g., hemoglobin) and protein-products (albumose) pass through the normal kidney without apparent resistance on the part of the organ.

III. METABOLISM, EXCRETION AND RETENTION IN NEPHRITIS WITH UREMIA

The accidents of nephritis, particularly uremia and edema, present much for study by chemical and physiologic methods. Uremia is certainly a toxic condition and many attempts have been made to identify the particular toxic agent responsible for it. Theory after theory has been discarded, with the result that the problem still remains unsolved. Nevertheless, certain phenomena of metabolism in the process have been worked out very concisely. Nitrogen excretion in uremia is usually low, but that it is the cause of the condition is combated by the fact that many nephritics show depressed excretion of nitrogen and are quite free from symptoms of uremia. Much more insistent claims have been made for intermediate products of protein metabolism, such as uric acid, carbamic acid and ammonia, as the etiologic agents in uremia, but more careful research has shown that even though these substances are retained they are not responsible for the condition. Inorganic salts have been held responsible for uremia and the discovery that the urine of uremics is of higher molecular concentration than normal led to the inference that the increase was due to salt concentration.

The fact was soon discovered, however, that increased molecular concentration appears in other diseases than nephritis and without uremia, and further, that the increase cannot be due to inorganic salts, because the urinary electrical conductivity remains the same as for normal urine. Alterations in the supposed internal secretions have been held accountable for the phenomenon and many experiments have been brought forward to support the view, but the most recent work indicates that the kidney in all probability has no internal secretion and the older work in partial nephrectomy, ligation of ureters and administration of extracts of kidney, has been held to be insufficient to prove the point.

That some toxic agent is at work cannot be denied, and numerous recent writers consider that it is in the nature of a specific lysin for kidney substance—a nephrolysin. That nephrolysins can be produced by artificial immunization of animals is quite true, but that they are absolutely specific for the kidney is open to grave doubt, and according to most observers their administration is attended by distinct lesions of other tissues, including the blood. The production of autonephrolysins, that is, by the animal for its own kidney, fails of conclusive demonstration. Nevertheless, it has been shown that

the serum of nephritic dogs contains a substance which on injection into other dogs produces a true nephritis. It is suggested, however, that this fact be applied to the pathology of nephritis only after further evidence has been adduced to support it. As material accumulates on this subject it seems evident that if the toxin is a nephrolysin, it probably is not identical with the nephrolysin obtained by artificial immunization. That seen in nephritis must have a much higher degree of specificity than the experimental product.

The relation of uremia to gastro-intestinal conditions frequently is brought forcibly to the attention of the clinician. Whether the gastro-intestinal condition, or the uremia, is the primary event is as yet an unsolved problem. Some experimental workers think that uremia produces toxins that are excreted into the intestinal tract and that these are of irritant nature. Recent work in nitrogen metabolism indicates that a large percentage of nitrogen is eliminated into the intestine and reabsorbed, but as yet there is no definite evidence to indicate that this process is associated with any distinct toxic elements. If intestinal conditions can produce the toxemia which we know as uremia, no acceptable evidence has been adduced to prove it.

IV. METABOLISM, EXCRETION AND RETENTION IN NEPHRITIS WITH EDEMA

Explanations of edema in connection with nephritis call into play physical, physiologic and chemical observations. Of great importance to the clinician are hydremia and chlorid retention, for these two factors are capable of control in the diet of the patient. Experimentally, hydremia appears to be absolutely necessary to the production of edema, and clinically it is generally conceded that some degree of hydremia plays an important part.[1] Lesions in the vessel walls, whether depending on the hydremia or on some toxic substance, possibly an endotheliotoxin, also influence the condition. From the standpoint of chemistry the question of chlorid retention comes more prominently to the fore than in any of the other phases of nephritis. That chlorids are retained in cases of edema and that increased elimination of chlorids appears at the time of disappearance of the edema are well-established facts.

The chief point under discussion at the present time, as to whether the retention of chlorids or the retention of water is primary, remains an open question. If the retention of water be primary, it requires sodium chlorid to balance the osmotic pressure in the blood. If the sodium chlorid retention is primary, the same need for balance of osmotic pressure is felt and water is retained. If the sodium chlorid occurs particularly in the tissues, then the attraction of water to the tissues is easily explained by the same necessity for equalization of osmotic pressure. Numerous views have been expressed pro and con, and experiment has been adduced for and against, but the matter remains in a somewhat chaotic and distinctly unsatisfactory state.

V. VASCULAR HYPERTENSION AND CARDIAC HYPERTROPHY

From the chemical point of view, so little has been done on the question of heart hypertrophy and vascular hypertension in chronic interstitial nephritis that it requires little discussion. Granting that the internal secretion of the kidney is a problematic factor we must turn to retained toxic substances or to the influence of other internal secretions, particularly that of the adrenal, for the explanation. Experimental, anatomic and physiologic work have appeared to throw some light on this phase from time to time, but as new facts have been brought out old ones have been controverted or minimized and to-day none of these branches of pure science can offer much for the satisfaction of the eager clinician.

What has been presented in this brief communication represents the results of years of ardent and careful work on the part of clinicians and laboratory men, working either separately or hand in hand. If there remains much to be learned, that does not minimize what has already been well established. As methods are improved and observation and deduction become more accurate, the results will become more applicable to the living human patient.

In this review I have drawn freely on the works of Von Noorden, Pearce, Bainbridge and Beddard and others, in addition to the most recent articles in current medical literature.

1320 South Broad Street.

1. Edema has been produced recently without introduction of excess of water into the animal, but this does not exclude hydremia as an essential factor in the development of the condition.

CLASSIFICATION OF DIPHTHERITIC CONJUNCTIVITIS

REPORT OF A CASE WITHOUT MEMBRANE FORMATION *

HARRY FRIEDENWALD, M.D.

BALTIMORE

The following case is reported because of the very severe catarrhal conjunctivitis due to diphtheria bacilli, which ran its course without the development of a membrane.

History.—The patient, a physician, aged 56, consulted me Jan. 25, 1908, for a very mild conjunctivitis of the right eye, the left being unaffected. The eye had been uncomfortable since the day before and he feared that some irritant like formaldehyd solution had caused the trouble. The irritation was chiefly in the inner canthus.

Course of Disease.—A 5 per cent. solution of argyrol was ordered but the condition did not improve and rather increased in severity.

January 27: Some of the secretion was sent to a bacteriologist, who reported that it contained bacilli but he was unable to determine them from the slide specimen.

January 29: The lids became greatly swollen and the eyes teared profusely. There was no purulent solution. The patient now complained of some discomfort of the nose and throat and a prominent rhinologist examined them and reported congestion of the pharynx and tonsils. The right tonsil was more prominent and there was an indistinct yellowish line near the posterior pillar in the long axis of the tonsil. Two prominent colleagues were called in, who likewise were unable to account for the ocular condition and its resistance to treatment.

January 30: The condition remained almost the same, the temperature being slightly elevated to 100 F. The patient was somewhat depressed, which was attributed to worrying about his condition. The pathologist suggested that the organism which had been handed to him was suggestive of diphtheria and he requested a smear from the edge of the lid. This was taken, as was one from the pharynx, and I may say that while the smear from the edge of the lid did not develop any organisms, the pharyngeal smear gave a typical growth of the diphtheria bacilli, and the pathologist was convinced that the organisms in the first slide were identical with these. The membranous rhinitis and pharyngitis meanwhile increased and large masses were subsequently thrown off.

January 31: The condition was as follows: There was no membrane formation in the conjunctiva of either lid. The

* Read at the joint meeting of the Sections on Clinical Medicine and on Ophthalmology, Baltimore City Medical Society, Jan. 20, 1911.

edema of the conjunctiva of the eyeball was very marked, as was also that of the lids. The cornea showed considerable irregularity of the epithelium without any ulceration. This had been noticed a day before. Along the intermarginal space when examined with a magnifying glass a few very fine gray spots were seen which could not be rubbed off with a cotton pledget. On this day, 2,000 units of antitoxin were given and in the evening 5,000 more. Within the next two days additional quantities of antitoxin were injected, making a total of 40,000 units.

February 1: Cultures taken from the eye were negative to diphtheria but showed staphylococci. The patient's condition improved after the use of antitoxin.

February 6: The temperature was normal; there was diminution of the secretion.

February 7: The nose began to give trouble and there was nosebleed; at this time the eyes again became more painful.

February 9: On this date I observed a faint superficial opacity running across the anterior of the cornea. The patient was now treated locally with argyrol and later with dionin, and the cornea became clearer though the central opacity remained. In the meantime the vision became almost half normal.

Subsequent History.—During the following June, the eye became congested and painful, and there was again breaking down at the side of the ulcer. The inflammation became rather intense and some hypopyon developed. Several weeks were required for recovery.

The peculiar course of this disease and the finding of the diphtheria bacillus in the fauces and the discovery of the same bacillus in the smear, though at first not recognized as diphtheria, with the undoubted diphtheritic appearance of the nasal and pharyngeal inflammation, seem to establish this as a case of diphtheritic conjunctivitis without membrane formation, in spite of the absence of the more convincing tests.

The inflammation in this case, while resembling the conjunctivitis due to the Koch-Weeks bacillus or to pneumococci, differed clinically, especially at first, in the absence of mucous or purulent secretion, in the resistance to ordinary treatment and in the appearance of the minute spots along the intermarginal border. Later, mixed infection occurred, as is not uncommon. The age of the patient is exceptional. Noll[1] has reported a patient aged 61, but he was able to find only a very few reported cases in adults (Kasztan, whose patient was 23 years old; Zur Nedden, whose patient was 17 years of age; Jessop,[2] whose patient was 29 years of age; and Schanz).

In the case here recorded it seems probable that the eye was the primary seat of infection, for the earliest nasal and pharyngeal symptoms made their appearance several days after the onset of the conjunctival disease.

A number of attempts have been made to substitute a bacteriologic basis for that of the clinical appearance in the classification of conjunctival diphtheria. Schirmer[3] pleads that we call all conjunctival inflammations due to diphtheria bacilli, diphtheritic conjunctivitis, it matters not what the clinical picture. Fuchs[4] in his textbooks takes the same view, distinguishing between superficial and a deep necrotic form. Luedde[5] contends against the old classification. Jessop[2] goes further and suggests that all cases of conjunctivitis with membrane should be merged into one class called "membranous conjunctivitis" or "membranous ophthalmia." . . . He would "like to see the term diphtheritic conjunctivitis disappear, as it is most confusing." On the other hand, many writers still hold firmly to the old classification, foremost among them being Saemisch[6] in his monumental work.

It is clear that accurate diagnosis and treatment as well as prophylaxis demand that we do away with the confusion. There is no possible reason why we should use one nomenclature for the pharynx and another for the conjunctiva. The term "diphtheritic" should in the future be applied only to inflammations produced by the diphtheria bacillus.

1029 Madison Avenue.

1. Noll: Arch. f. Augenh., lix, 14.
2. Jessop: Tr. Ophth. Soc. U. Kingdom, 1902, xxii, 58.
3. Schirmer: Arch. f. Ophth. (Graefe's), 1894, xl, No. 5, p. 161.
4. Fuchs: Augenheilkunde, sixth German ed., p. 96.
5. Luedde: Am. Jour. Ophth., 1907, p. 231.

CARBON MONOXID POISONING RESULTING IN GANGRENE OF BOTH LEGS

ANGUS McLEAN, M.D.

DETROIT

The ordinary clinical picture of carbon monoxid poisoning is almost too well known to demand description. Carbon monoxid is a gas which, being colorless and tasteless, is usually inhaled unconsciously. Most cases of poisoning occur during sleep. It is an exceedingly poisonous gas. The method by which it produces its direful and fatal effects is by forming with the blood coloring-matter a compound which is more stable than oxyhemoglobin.[1] The affinity of carbon monoxid for hemoglobin being 200 times greater than that of oxygen, it causes asphyxia by destroying the power of the blood-corpuscles to carry oxygen from the air to the tissues.

The symptoms encountered when a considerable amount of this gas has been inhaled are vomiting, languor, headache, debility, etc., leading to deep unconsciousness, with shallow breathing, rapid pulse, cold, clammy perspiration and, finally, death. With active treatment patients in extreme conditions often recover, but on account of the stability of the carbon monoxid compound formed with the blood coloring-matter, the symptoms of languor, etc., often are very persistent, lasting until the coloring-matter, rendered useless by the carbon monoxid, is replaced by a new formation. This time is very variable and may last from several days to several weeks, when the condition of the patient again gradually becomes normal. This gradual return to normal is not, however, always uneventful. Nervous symptoms, even simulating insanity,[2] cerebral hemorrhages,[3] usually occurring in the caudate nucleus and optic thalamus, hemiplegia,[4] nutritive changes in the brain and skin,[5] etc., all have been recorded as occurring after carbon monoxid poisoning in persons apparently normal up to the time of the accidental inhalation of the gas.

I report herewith a case of carbon monoxid poisoning, followed by a very stormy convalescence, characterized by a clinical picture which is rare—indeed unique, for nowhere in the literature of the last decade have I been able to find a similar report. The case is one in which the carbon monoxid poisoning was followed by gangrene of both legs, necessitating amputation. The history of the case is as follows:

6. Saemisch: Graefe-Saemisch Handbuch der gesamten Augenheilkunde, v, Part I, p. 332.
1. Ueber symmetrische Gangrene, Ztschr. f. Heilk., 1882, iii; Wien Klin., 1882, Nos. 10 and 11.
2. Certain Alterations in the Blood and Lungs in CO Poisoning, Kharkow Med. Jour., 1908, v, 447.
3. Hirnblutung bei CO Vergiftung, München. med. Wchnschr., 1909, lvi, 1211; Gehirnblutung im Folge einer Kohlenoxydvergiftung, Aertzl. Sachverst-Ztg., Berl., 1908, xiv, 135.
4. Fall von Hemiplegia nach Kohlendunst, München. med. Wchnschr., 1903, l, 757.
5. Ueber Ernährungstörungen des Gehirns und der Haut nach CO Vergiftung (Haufgangrene), Wien. med. Wchnschr., 1905, lv, 1621.

J. H., male, aged 22, American by birth, was admitted to Harper Hospital Dec. 20, 1909. The patient's family and previous history were unimportant. There was no specific history. On the morning of Dec. 20, 1909, the patient was found unconscious in his bed in a room in which there had been burning a small gas-burner, from which the flame had become extinguished during his sleep. He was immediately sent to the hospital and on admission at 11 a. m. there were present profound unconsciousness, slow, shallow respiration and a rapid, thready, uncountable pulse. He had involuntary evacuations from his bladder and his body was covered with a cold clammy perspiration. Shortly after admission his temperature was 102 F. The leukocyte count, differential and absolute, was normal. The red blood-count was normal, but there was present a marked degeneration of red blood-cells, with a striking tendency to clumping, each clump with a nucleus of débris taking a deeper stain. The hemoglobin index was 40 per cent. The diagnosis was carbon monoxid poisoning. From inquiry at the chemical laboratory of the City Gas Company, it was determined that the gas inhaled by the patient was illuminating gas and that the most actively poisonous ingredient, carbon monoxid, was present in the proportion of 7 per cent. A lesser percentage will readily produce poisoning.[1] Forty-eight hours after admission, during which time stimulation, artificial respiration and oxygen inhalation had been resorted to almost continuously, the patient had regained sufficient consciousness to speak. His pulse and temperature gradually approached the normal. By the end of the fourth day he was able to sit up; on the fifth day he walked about a little. He was dismissed on the evening of the fifth day apparently in good condition, complaining, however, of pain in the feet and legs.

December 27, two days after leaving the hospital, he was again admitted on account of the increasing pain in the feet and legs. Examination showed that the legs and feet were swollen and slightly discolored in patches, the discoloration extending below the knees, somewhat higher on the right than on the left side. The limits of the discoloration were rather sharply defined. The discolored portions were cold, and sensation was practically absent. During the next two weeks the pain in the legs continued, at times being so severe that it necessitated the administration of opiates. The discoloration increased to gangrene, the dorsum of each foot being seemingly attacked last. The legs became edematous.

January 7, longitudinal incisions were made to determine the condition of the deeper tissues. These were found to be necrotic, with all the appearances of moist gangrene. Culture showed pure growth of *Staphylococcus aureus*. Up to this time the patient's condition was extreme; he was delirious at times, with an irregular temperature curve ranging between 101 and 105 F.; pulse 130 to 160, systolic blood-pressure 110 mm. The blood-picture showed a marked leukocytosis with 85 per cent. polymorphonuclear leukocytes.

January 9, the right leg was amputated, and January 13 the left leg. For the remaining part of January the patient's condition was very critical. Bed-sores developed over the sacrum and on either buttock. The flaps of the left stump sloughed away. There was profuse sweating practically all the time. January 16, the blood examination showed hemoglobin 55 per cent. The red cells numbered 4,376,000, but were degenerated and very pale. The leukocytes were diminished in number. The blood itself was very watery and showed practically no tendency toward clotting.

About the middle of February the patient began to improve generally and the stumps showed evidences of granulations around the skin margins. On March 19 he was anesthetized (ether narcosis) and the stumps were trimmed; the right tibia and fibula were disarticulated at the knee-joint, and a portion of the condyles of the left femur were removed. From this time convalescence was uneventful; the stumps made good progress, being almost completely closed over at the time of his dismissal one month later.

The patient was dismissed April 15, 1910, practically four months from the time he was asphyxiated.

This case demonstrates that the effects of carbon monoxid poisoning are more far-reaching than is generally supposed. It also demonstrates that although recovery may be apparently complete, yet after the lapse of a few days or (as in some cases reported in the literature, reference to which will be appended below), even a few weeks the most startling and irreparable damage to the human organism may become evident as a result of the inhalation of this gas.

The question naturally arises: What is the exact pathologic condition which occasions such a wide-spread destruction of tissue, as, for instance, gangrene of both legs in the case above reported? In this case diabetic gangrene, chemical gangrene, senile gangrene and gangrene from exposure to extremes of temperature can all be excluded. Thrombotic and embolic gangrene, too, can be excluded, at least in this case, as after a careful search for thrombi and emboli our findings were negative. Some writers, however, report cases of thrombosis[6] following carbon monoxid poisoning. Such a case occurred in the practice of Dr. William J. Seymour some years ago.

A man aged 45, entered St. Mary's Hospital, Detroit, unconscious from carbon monoxid poisoning. He remained unconscious for about twenty-four hours, after which he complained of headache, stupor and a general languid feeling. On the fifth day he complained of considerable pain in his left arm, after which the hand and forearm became immensely swollen and edematous. This condition of pain and swelling persisted for about four weeks; then it gradually subsided. The diagnosis here was thrombosis of the axillary vein.

There certainly was no such picture in my case. Besides, if due to thrombosis, the gangrene would more probably have been unilateral. What then was the condition to which the gangrene in this case could be attributed? Was it an angioneurotic gangrene—the poison having affected the trophic nerves or the trophic cells in the anterior part of the cord, causing degenerative changes, thus disturbing their functionating power, which became manifest first by an angiospastic anemia, or, as Weiss[7] calls it, a "regional ischemia," resulting finally in gangrene? Or was it due to the constitutional, or rather the general, altered condition of the blood, the nutritive powers of which had been so enormously diminished by the sudden formation of the carbon monoxid-hemoglobin compound, that the parts in which normally the circulation is poorest, i. e., the lower extremities, would naturally become affected first?

Of the first proposition I can say but little definitely, for I had no way of determining whether or not the degenerative changes really did take place in the trophic nerve-cells or their fibers. Any conclusion I could draw from this as to the primary pathologic condition causing the gangrene in the extremities would, therefore, at best be but problematical.

As to the second proposition, the altered nutritive value of the blood, we know that the hemoglobin is the oxygen-carrier of the blood, and that this oxygen carried by the blood is absolutely essential to the life of the body tissues. If, for some reason or other, the normal supply of oxygen is disturbed and a sufficient amount prevented from coming into contact with the tissues, these will suffer and, depending on the amount of oxygen of which they are deprived, gangrene or other nutritive changes

6. Hirnblutung und Erweichung bei CO Vergiftung, Strassb. med. Ztg., 1909, vi, 165.
7. Korsakoffsches Syndrom bei CO Vergiftung, Berl. klin. Wchnschr., 1908, xlv, 1621.

will result. Such is the condition which it seems we had to contend with.

Hemoglobin, once converted into carbon monoxid hemoglobin, is useless for the body economy. This compound is stable and for this reason oxygen can never displace the carbon monoxid. After carbon monoxid poisoning, the normal oxygen supply to the body will take place only when a new supply of hemoglobin has been furnished; in other words, the tissues must wait for their normal oxygen supply until such a time as the body will again be able to furnish or manufacture, if you will, a sufficient supply of hemoglobin to carry the oxygen to its different parts. If, in the first place, the amount of carbon monoxid inhaled is so great as to combine with all the hemoglobin of the blood, the condition resulting (i. e., 100 per cent. carbon monoxid hemoglobin, 0 per cent. hemoglobin or oxyhemoglobin), is incompatible with life and the patient dies immediately. If, on the other hand, the amount of carbon monoxid inhaled is such that it combines with only part of the hemoglobin of the blood, the condition resulting (say, 50 per cent. carbon monoxid hemoglobin and 50 per cent. hemoglobin or oxyhemoglobin), is such that the patient will live, but the tissues will not receive the necessary supply of oxygen for the performance of their normal functions. This insufficient supply of oxygen will continue until the time when the new formation of hemoglobin can take place. During this time, the hemoglobin which is free from carbon monoxid must supply the oxygen to the tissues as best it can. The amount thus supplied may be sufficient to sustain life in every part of the organism. If it falls short of this, the parts in which circulation normally is poorest will first show the effects of insufficient oxygenation. This condition, I think, is well illustrated in the case reported. Here, hemoglobin, sufficient to cause grave constitutional disturbance and death of both extremities (the parts normally sparingly supplied with blood), but not sufficient to cause the death of the organism, was rendered inert by the formation of the stable carbon monoxid hemoglobin compound.

According to experiments by Nasmith and Graham[8] made on guinea-pigs, the time for the new formation of hemoglobin is variable, three to four weeks usually elapsing before the oxygen-carrying power of the blood again becomes normal; i. e., before compensation takes place by an increased number of red blood-cells and hemoglobin content. At the end of this time the irreparable damage, as in the case reported, will have been done and the best that can then be expected from the compensation is to improve the vitality of those parts which have not been starved beyond repair; in other words, which have not gone on to the stage of gangrene.

This explanation of the gangrene following carbon monoxid poisoning seems plausible to me. Sufficient proof, however, is not at hand to determine this fact definitely. Yet, on considering the exact mode of onset in this case—how the gangrene did not commence at the toes and travel progressively upward, but how islands of comparatively healthy tissue were left in which vitality seemed to persist longer than even some more proximal parts—on considering other cases of gangrene of the skin reported, in which the gangrenous patches were usually distributed irregularly over the body where the activity of the peripheral circulation is often impaired even normally, I feel more than ever that the diminished nutritive value of the blood brought about by the formation of carbon monoxid hemoglobin is the most probable cause of the localized gangrenous condition.

57 Fort Street, West.

8. Jour. Physiol., 1906-7, xxv, 32.

NOTE.—References additional to those numbered in the text of the article are as follows:

Knecht: Deutsch. med. Wchnschr., 1904, xxx, 1242.
Hoffman: Virchow's Arch. f. path. Anat., 1865, xxxii, 450.
Klebs: Berl. klin. Wchnschr., 1891, No. 45.
Litten: Deutsch. med. Wchnschr., 1889, No. 5.
Alberti: Ztschr. f. Chir., Aug. 25, 1884, p. 476.
Hasse: Berl. klin. Wchnschr., 1891, No. 45.
Tod durch Einatmen von Kohlengas, etc., Friedreich's Bl. f. gerichtl. Med., 1904, lv, 66.
Durch Kohlengas Vergiftung erzeugte juvenile Hemiplegia, Pest. med.-chir. Presse, Budapest, 1904, xl, 25.
Ueber Schwere Anaemie mit Hyperglobulie als Folgezustand chronischer Kohlenoxydvergiftung, München. med. Wchnschr., 1904, li, 739.
A Case of Poisoning by Illuminating Gas, New York Med. Jour., 1904, lxxx, 404.
Erkrankungen des Nerven-Systems nach CO, Deutsch. med. Wchnschr., 1904, xxx, 1242.
Zur Kentniss der Gehirnerkrankungen nach Kohlenoxydvergiftung, Ztschr. f. klin. Med. Berl., 1903, iii, 137.
Studies on the Effects of CO Poisoning, Proc. Soc. Exper. Biol. and Med. N. Y., 1908-9, vi, 68.
Ueber die Einwirkung von Giften auf die Gefässwandung, Wien. klin. Rundschau, 1909, xxiii, 241.
A Case of CO Poisoning, Tr. Royal Acad. Med. Ireland, 1905, xxiii, 376.
The Hematology of CO Poisoning, Jour. Physiol., London, 1906-7, xxxv, 32.
Ueber die aufnahme des Kohlenoxyds durch das Nervensystem, Arch. exper. path. u. Pharmacol., Leipsic, 1906-7, lvi, 201.
Kohlenoxyds Vergiftung, Med. Klin. Berl., 1907, iii, 146.
Ueber eine Spätwirkung und Nachwirkung des im Betriebe eingeatmentem Kohlenoxyds, Berl. klin. Wchnschr., 1907, xliv, 1367.
Death from the Effects of CO, Brit. Med. Jour., London, 1908, ii, 1899.
Three Cases of Poisoning by CO; One Recovery, Lancet, London, 1908, p. 558.
A Case of Poisoning by CO, Occidental Med. Times, San Fran., 1903, xvii, 334.
Polyneuritis Following CO, Pest. med. chir. Presse, Budapest, 1903, xxxix, 965.
A Case of Poisoning by CO, Lancet, London, 1905, ii, 1894.
Poisoning by Coal Gas, Wisconsin Med. Jour., 1906-7, p. 73.
Zur Untersuchungen des Kohlenoxyds Vergiftung, Berl. klin. Wchnschr., 1904, xli, 1233.
A Case of Acute Dementia and Mental Stupor Following Illuminating Gas Poisoning, Jour. Nerv. and Ment. Dis., 1905, xxxii, 332.
Die histologischen Verletzungen in CO Vergiftung, Friedreich's Bl. f. gerichtl. Med., 1905, lvi, 251.
Hektoen and Riesman: American Text-Book of Pathology, W. B. Saunders Co., 1902, p. 377.

A NEW METHOD OF COUNTING THE BLOOD-PLATELETS FOR CLINICAL PURPOSES

AND SOME OF THE RESULTS OBTAINED WITH IT *

JAMES HOMER WRIGHT, M.D.
AND
ROGER KINNICUTT, M.D.
BOSTON

A number of methods[1] have been employed for estimating the number of blood-platelets per cubic millimeter of blood, but none of them has seemed to us practical or satisfactory for clinical purposes. A new method has therefore been devised, and it is as follows:

The blood is mixed with a diluting fluid in the proportion of 1 to 100 by means of the pipette used for counting red blood-corpuscles, and the counting is done in an ordinary blood-counting chamber with a high power dry objective. In order to render the platelets more clearly visible, the specially thin cover-glass of Zeiss, with central excavation, is used (cover-glass No. 146, Zeiss catalogue). This may be obtained from Eimer & Amend, 205 Third Avenue, New York. The diluting

* From the Pathological Laboratory of the Massachusetts General Hospital.

1. The methods and observations of most other workers in this field are well described and summarized in the papers by J. H. Pratt (A Critical Study of the Various Methods Employed for Enumerating Blood-Platelets, THE JOURNAL A. M. A., Dec. 30, 1905, p. 1999), and by Kemp, Calhoun and Harris (The Blood-Plates: Their Numeration in Physiology and Pathology, THE JOURNAL A. M. A., April 7, 1906, p. 1022, and April 14, 1906, p. 1091).
References not given in these papers are: Howlett: Lancet, London, 1882, i, 223. Osler: Medical News, April 3, 1886, p. 365. Eschlstowitsch: Folia hæmotol., Berl., iv, 295. Cadwalader: Bull. Ayer Clin. Lab. Penn. Hosp., No. 3, 1906, p. 50.

fluid consists of two parts of an aqueous solution of "brilliant cresyl blue" (1:300) and three parts of an aqueous solution of potassium cyanid (1:1,400). These two solutions must be kept in separate bottles and mixed and filtered immediately before using. Of course, the pipette should be well shaken before withdrawing the sample for counting. After the counting chamber is filled it is left at rest for ten or fifteen minutes in order that the blood-platelets may settle to the bottom of the chamber and be more easily and accurately counted.

The platelets appear as sharply outlined, round or oval, or elongated, lilac-colored bodies, some of which form a part of small spheres or globules of hyaline, unstained substance.

The red cells are decolorized and appear only as "shadows," so that they do not obscure the platelets. The nuclei of the white cells are stained a dark blue, the protoplasm light blue. If the technic is correct there should be no precipitate in the preparation.

The cresyl blue solution is permanent, but should be kept on ice in order to prevent the growth of yeasts. The cyanid solution should be made up at least every ten days. It is, of course, necessary that the solution be made from pure potassium cyanid, which has not undergone decomposition. As already stated, the two solutions must be mixed and filtered immediately before using, because after filtration, if the mixture is allowed to remain exposed to the air for a short time, a precipitate will form in it. After the diluting fluid has been mixed with the blood in the pipette, however, no precipitate forms and, as the platelets do not quickly break up in the mixtures, the counting may be done after some hours, if necessary. For example, a count immediately after filling the pipette was 258,000, and another count from the same filling of the pipette made eighteen hours later was 253,000.

A proper technic yields a remarkably even distribution of the platelets in the chamber. For all practical purposes the counting of the platelets in 100 small squares is sufficient, but for greater accuracy all 400 small squares should be counted, or 200 small squares in each of two fillings of the chamber.

Table 1 is a sample count showing the even distribution of the platelets in the counting chamber:

TABLE 1.—PLATELETS COUNTED IN A ROW OF TWENTY SMALL SQUARES

—Chamber 1.—		—Chamber 2.—	
22	21	21	25
27	28	21	23
27	24	27	22
23	30	22	25
21	21	23	31
120	124	120	126

By our method the platelet count of normal adults is found to vary from 226,000 to 367,000 per cubic millimeter, the general average being 297,000. Table 2 is a table of counts of normal individuals, all adults males.

TABLE 2.—COUNTS OF BLOOD-PLATELETS IN NORMAL INDIVIDUALS

Normal Individuals.	No. of Counts.	Over period of	Average.	Highest.	Lowest.
A	23	1 year	272,000	328,000	226,000
B	5	2 weeks	336,000	367,000	297,000
C	2	1 week	305,500	319,000	292,000
D	4	10 days	263,500	272,000	252,000
E	2	1 week	332,000	347,000	317,000
4 individuals, 1 count each			273,250	330,000	224,000

The objection has been made to the methods of platelet enumeration involving the use of a mixing pipette, that the counts obtained by them are too low because many of the platelets stick to the glass of the pipette and thus escape observation. We do not think that this objection applies to our method, for the following reasons:

1. When blood and, immediately afterward, the diluting fluid are drawn up into a capillary pipette, microscopic examination does not reveal any platelets sticking to the glass.

2. Our normal counts range higher than those of all other observers who have employed methods involving the use of a pipette, except one. Thus, the highest count among the large number of counts contained in the reports of Cadet and others is only 310,000. The exception is the count of *"kaum ½ million"* stated by a reviewer to have been found by Prus for normal blood in contrast to 2,000,000 for leukemic blood. This inexact numerical expression might very well mean a count, or counts, for normal blood not greatly in excess of our own. Van Emden, however, used Prus' method and obtained normal counts which do not range as high as our own. He attributed Prus' apparently high normal figure to fragmentation of the blood-cells by too much shaking of the pipette.

3. Our normal counts do not differ significantly from those obtained by several observers who used methods based on the determination of the ratio between the platelets and the red corpuscles. Thus, Pizzini obtained figures varying from 250,000 to 370,000 among fifty-seven counts made on seven healthy persons to determine the possible effect on the numbers of the platelets produced by digestion, heat, cold and fatigue; Determann among twenty-five normal bloods found counts varying from 180,000 to 250,000, if we assume that the red corpuscles count for each was 5,000,000; and Cadwalader, in nine counts on two normal persons, found 259,360 to 400,000 the average being 348,000.

Certain other observers, however, working with ratio methods, have reported higher normal counts than those just mentioned, but we believe that their methods were erroneous and that their results are not reliable.

Thus, Brodie and Russell used a diluting fluid consisting largely of glycerin, which is destructive to red corpuscles, and therefore the ratios which they obtained are obviously not to be relied on as being the true ones.

Kemp and Calhoun report twenty counts from thirteen normal persons, ranging from 730,000 to 962,000. In a later paper, however, they report that they found fifteen ratios of platelets to red corpuscles in five normal men, determined on the same three successive days, to vary from one to eighteen to one to twenty-three, which, on the basis of 5,000,000 red corpuscles to the cubic millimeter, would represent counts of only about 217,000 to 270,000. Such a marked discrepancy between these two sets of counts seems to us to be sufficient to discredit their method and the high counts which they obtained with it.

J. H. Pratt found in seven normal individuals counts agreeing with ours (226,000 to 377,000), but in eighteen others his counts vary from 416,000 to 725,000. In view of the results of other workers, this seems to us to be a wider degree of variation in normal individuals than can be accounted for by any supposed superiority in his method, and we therefore believe that these higher counts should not be accepted.

4. The closeness of successive counts from the same individual and the high counts obtained in certain diseases are also good evidence. For example: 257,000, 271,000 and 263,000 from a normal individual; 698,000 and 708,000 from a case of hemophilia; and 1,130,000 and 1,077,000 from a case of anemia after hemorrhage. These results seem to us to be incompatible with any important loss of platelets by sticking to the glass. If there be a loss of platelets, it must be a constant factor which does not vitiate the usefulness of our method for determining the fluctuations in the numbers of the blood-platelets.

We have counted the platelets by this methods in a considerable variety of diseases, studying especially their numbers in anemia, in typhoid fever and in pneumonia,

and the results obtained are summarized below. Our observations fully confirm those of Hayem and others in the three diseases mentioned.

In secondary anemia we have found the blood-plate count to be generally high, while in pernicious anemia we have found it to be always low at some period of the disease. Thus, in seven out of nine cases of secondary anemia, counts above 400,000 were obtained, while in none of the cases was a count below normal found. The highest counts were 1,130,000 and 1,162,000 obtained in two cases due to hemorrhage. On the other hand, in nine cases of pernicious anemia the twenty-three counts made varied from 20,000 to 161,000 while the tenth case showed a count of 381,000, which fell to 172,000 ten days later.

In view of these observations, it would seem that the platelet count will prove to be of material assistance in distinguishing between the two forms of anemia in doubtful cases.

This contrast between the two forms of anemia in the platelet content of the blood is readily explained by the following considerations: It is well known that in secondary anemia an hyperplasia of the red marrow of the bones takes place sooner or later and thus an increase is brought about in the number of the marrow giant cells, the megakaryocytes, which have been shown by one of us,[2] to produce the blood platelets by the fragmentation of their cytoplasm. Consequently, the number of the platelets in the blood is increased. On the other hand, the diminution in the number of the platelets in the blood of pernicous anemia is explained by the observation of one of us that the peculiar red marrow of this disease, although greater in amount than normal red marrow, regularly does not contain as many giant cells as does normal red marrow or the hyperplastic red marrow of secondary anemia.

In two cases of chlorosis, normal counts were noted, while in a case of splenic anemia a count of 75,000 was obtained.

In three out of four cases of lymphocytic leukemia, one being of the large cell type, the counts were lower than normal, ranging from 37,000 to 130,000. We attribute the low counts to lymphomatous transformation of the bone marrow, with consequent reduction in the number of marrow giant-cells.

In two cases of myelocytic leukemia the counts were high, varying from 595,000 to 860,000, while in one case the count was normal. In this connection it is of interest to note that while the leukocyte count in one case fell from 385,000 to 161,000 under *x*-ray treatment, the blood-platelet count, which had been 860,000, remained high, 771,000. This observation constitutes additional evidence that the blood-platelets are not closely related to the leukocytes, or to their parent cells of the bone marrow, the myelocytes.

Forty-four counts in all were made in seventeen cases of typhoid fever. The results show that in the beginning of the disease the number of the blood-platelets is below normal or a low normal, but as the disease progresses their number increases and during convalescence may be very high, in one case reaching 759,000. In two cases of relapse the platelet count became low after having been normal or high, becoming again normal or high in convalescence.

In lobar pneumonia during the progress of the disease the number of the platelets may be low, normal, or slightly above normal, but at or soon after the crisis it increases very rapidly and in one case reached 944,000. In a case in which empyema developed the counts rose to 714,000 and 813,000 during this complication, while during the pneumonia they were 229,000 on two occasions.

In two cases of malaria there were low counts. In one of them the count was 143,000, but six days after quinin treatment had begun it had risen to 449,000.

In a case of hemophilia with persistent epistaxis and purpura, the count was 125,000 on July 2 and 337,000 on August 17, but fell to 27,000 three days later. Another count made after the lapse of some months was 87,000. In another case of hemophilia, however, the count was high, being 698,000, and 708,000 three days later. A case of Henoch's purpura also showed high counts (508,000 to 645,000 in five counts during sixteen days).

In a child with chronic bloody diarrhea due to ulcerative colitis, five counts made in the course of three weeks varied from 18,000 to 62,000.

The platelet counts of a man who had been drunk for about two months and had eaten but little, was of special interest. He entered the hospital with delirium tremens, bleeding from the gums and symptoms suggestive of scurvy. He also had cirrhosis of the liver. Two days after entrance the count was 136,000. Under feeding and the administration of orange juice he rapidly grew better and the counts taken at intervals of one or two days were successively, 141,000, 160,000, 187,000, 270,000, 365,000 and 350,000.

Counts made in other diseases were as follows: infectious polyarthritis, two cases, 518,000 and 641,000; pleurisy with effusion, two cases, 628,000 and 335,000; streptococcus septicemia, 456,000; chorea, 445,000; "Hodgkin's disease," 458,000; gangrene of the gall-bladder, 221,000.

The relation of the number of the blood-platelets to the number of the leukocytes in the same blood has also been studied. By using a counting-chamber with a Türck ruling, we have been able to make leukocyte counts parallel with the platelet counts in the same chamber, the counting being facilitated by the staining of the leukocytes. In this way 164 leukocyte counts of widely varying figures were obtained and compared with the platelet counts in the same cases. The results clearly show that variations in the number of the platelets and in the number of the leukocytes have no constant relation to each other. This is a further evidence that the blood-platelets are not derived from the leukocytes, as some writers have believed.

2. Wright, J. H.: The Histogenesis of the Blood-Platelets, Jour. Morphol., July, 1910, xxi, No. 2; Publications Massachusetts Gen. Hosp., iii, No. 1.

For Honest Advertising.—"The action of the federal authorities in excluding offending newspapers from the mails protects only a part of the readers of fraudulent advertisements. There should be state legislation holding publishers accountable for printing the palpably dishonest advertisement swindles, and of all other unscrupulous advertisers who seek to betray the reader's confidence in the integrity of the press." Above is the concluding paragraph of Governor Osborne's inaugural message to the legislature. It is given prominence here for the reason that no Detroit daily newspaper has printed it, with the exception of the *Times*, and we believe it merits the widest possible publicity. Dishonest advertising is eliciting increasingly courageous criticism from the more reputable journals throughout the country.—Detroit *Saturday Night*.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

COLLOIDAL SILVER PREPARATIONS[1]

Under certain conditions involving a very fine state of subdivision, metallic silver and some of its compounds ordinarily insoluble appear to become soluble in water. These preparations are not precipitated by the ordinary precipitants of silver salts. Consequently they can be mixed with organic liquids or injected into the tissues or even into the bloodstream without precipitation and without causing marked symptoms or irritation. They possess to a greater or less degree the antiseptic properties of solutions of silver.

CARGENTOS.—Argenti Oxidum Colloidale, Mulford.—Colloidal Silver Oxide, Mulford.—Cargentos is claimed to be a preparation of colloidal silver containing 50 per cent. of metallic silver in the form of oxide, together with a sufficient amount of modified casein to maintain the silver oxide in colloidal form when in solution.

Cargentos is prepared by precipitating an alkaline solution of silver caseinate and silver oxide by an acid, dissolving the precipitate in an alkali, dialyzing the resulting solution against running water and evaporating the remaining colloidal solution to dryness in vacuo.

Cargentos occurs in odorless and tasteless black scales of metallic luster. It is freely soluble in water and glycerin. Solutions of cargentos are reddish brown by transmitted light and greenish black by reflected light. Solutions of cargentos should be prepared with cold water and kept in dark colored bottles.

Its solutions are not precipitated by sodium chloride nor by albumin in the secretions.

Cargentos, when assayed by the following method, should be found to contain silver equivalent to 48 to 52 per cent.

0.3 to 0.5 Gm. cargentos is weighed into a crucible, ignited gently at first, afterwards with full flame of a bunsen burner, until the ash is light in color.

The residue is treated with concentrated nitric acid and if completely dissolved the solution is diluted with 50 Cc. water, 2 Cc. ferric ammonium sulphate solution added and directly titrated with tenth normal potassium sulphocyanate. If after treating with nitric acid an insoluble residue of silver chloride remains, it is collected on a filter, washed with water, dried, ignited and weighed as silver chloride; the silver content of the filtrate is determined by titration with tenth normal sulphocyanate as before and the silver so found is added to that obtained in the silver chloride.

Actions and Uses.—Cargentos is claimed to possess considerable germicidal power and pronounced penetrating properties. It is said to be non-irritating even in 50 per cent. solution.

It is said to be useful as a substitute for the ordinary compounds of silver in treatment of inflamed mucous membranes and as an intestinal antiseptic. It may be used in 50 per cent. solutions for the purpose of producing a shadow in Roentgenographic examinations.

Dosage.—For application in diseases of the eye and of the genitourinary organs 5 to 25 per cent. solutions; for application to other mucous membranes 10 to 50 per cent. solutions may be used. Freshly made solutions are always to be preferred.

Manufactured by H. K. Mulford Company, Philadelphia. Process patent applied for. Not trademarked.

Cargentos Tablets.—Colloidal Silver Oxide, 3 grains, Mulford.—Each tablet contains cargentos 0.195 Gm. (3 grains) without excipient.

To prepare a solution the tablet should be crushed and powdered, sprinkled on the required quantity of cold water and allowed to stand for about 5 minutes and then agitated until solution occurs.

Cargentos Rectal Suppositories.—Colloidal Silver Oxide Rectal Suppositories, Mulford.—Each suppository weighs 1.25 Gm. (19¼ grains) and contains cargentos 0.130 Gm. (2 grains) in a vehicle consisting of oil of theobroma together with a sufficient quantity of yellow wax.

Cargentos Vaginal Suppositories.—Colloidal Silver Oxide Vaginal Suppositories, Mulford.—Each suppository weighs about 6.4 Gm. (98½ grains) and contains cargentos 0.325 Gm. (5 grains). The vehicle consists of oil of theobroma together with a sufficient quantity of yellow wax.

Cargentos Urethral Suppositories.—Colloidal Silver Oxide Urethral Suppositories or Bougies, Mulford.—Each suppository weighs about 2.5 Gm. (37 grains) and contains cargentos 0.130 Gm. (2 grains). The vehicle consists of glycerite of boroglycerin, gelatin and water.

OVOGAL—Albumen Cholicum.—Ovogal is a combination of bile acids with egg albumen.

Ovogal is a greenish-yellow powder, insoluble in water, dilute acids, ether, benzol, fats, etc. Alcohol and acetone do not dissolve it, but after long action remove from it small amounts of the bile acids. Alkalies dissolve ovogal, splitting it into albumen and bile acids (glycocholic and taurocholic acid).

If 0.5 Gm. of ovogal is boiled with 1 to 2 Cc. hydrochloric acid until a clear green solution is produced and then diluted with from 30 to 40 Cc. of absolute alcohol an abundant cloudy precipitate separates, which when washed with alcohol until the washings are colorless, gives the characteristic reactions for proteins. On evaporation of the alcoholic filtrate, the bile acids may be recovered and identified. Ovogal on ignition should leave no weighable residue.

Actions and Uses.—Ovogal is said to pass the stomach without marked decomposition and to be dissolved and absorbed in the intestine.

For therapeutic indications see Bile Salts.

Dosage.—0.5 to 1 gm. (8 to 15 grains) several times daily in capsules with water, tea, coffee or fruit juices.

Manufactured by J. D. Riedel A. G., Chemische Fabriken, Berlin, Germany. (Riedel & Co., New York.) Not patented in U. S. German patent No. 176,945. U. S. trademark No. 78,352.

Ovogal Capsules.—Each capsule is said to contain ovogal 0.5 Gm. (7½ grains).

XERASE.—Xerase is a mixture of a specially prepared dry beer yeast 150 parts, grape sugar (dextrose) 20 parts, white bole 125 parts and a mixture of nutritive salts 3 parts.

Xerase is a yellowish-gray powder, having a weak odor of yeast and a salty taste. It is only slightly soluble in water. It resists ordinary atmospheric conditions.

Actions and Uses.—This mixture is absorbent on account of the bole and readily induces fermentation which is favored by the sugar and salts and it is claimed that the yeast has a bactericidal action on such organisms as the gonococcus. It is said to adhere readily to mucous membranes.

It is claimed that this mixture is useful in inflammations and ulcerations of the vaginal and cervical mucous membranes and in the treatment of putrid wounds, ulcers, inoperable carcinoma, etc. It may be applied as a powder by insufflation or inserted into the vagina in a gelatin capsule.

Manufactured by J. D. Riedel Aktiengesellschaft, Berlin, Germany (Riedel & Co., New York). Not patented in the United States. U. S. trademark applied for.

Xerase Capsules.—Each capsule contains about 3 Gm. (45 grains) of Xerase.

1. In accepting Cargentos, the Council has voted that a general article on Colloidal Silver Preparations be inserted in N. N. R. and Cargentos and Collargol be placed under it.—W. A. PUCKNER, Secretary

Therapeutics

TYPHOID FEVER

VACCINATION AGAINST TYPHOID FEVER

The demonstration of the important relation which bacilli bear to typhoid fever led shortly to the query as to whether by cultivation of the bacilli any product could be obtained which might be successfully used in the treatment of the disease or in its prevention.

The studies of Haffkine, in India, with reference to obtaining a substance which could be used for prophylactic inoculation in the prevention of cholera, led to similar investigations in regard to typhoid fever. These were taken up by Pfeiffer, in Germany, and in London by Sir Almroth E. Wright; and to Wright especially do we owe the development of the present system of antityphoid inoculation.

The vaccine used for preventive inoculations is prepared by cultivating a strain of not very virulent typhoid bacilli. These are destroyed by heat and have added to them a small amount of an antiseptic to prevent contamination with aerobic microorganisms. It is customary to standardize the solution so that 1 c.c. will contain 1,000,000 of the bacilli. This is the usual dose administered, although sometimes half the quantity is used. The vaccine retains its strength for at least three months, and it has been found in some cases to retain its efficiency for fifteen months. It is used by hypodermatic, not intramuscular, injection and is usually given in the arm, but it may be given under the skin of the abdomen. It is usually advisable to repeat the dose after ten or twelve days in order to get the maximum amount of protection from the inoculation. Following the first dose there is a varying amount of reaction. This may be indicated locally by redness of the skin, which may vary from a patch three or four inches in diameter to one that extends down the forearm and to the shoulder. The axillary glands may be enlarged.

Accompanying this local reaction there may be a constitutional reaction which may vary from slight indisposition in mild cases to chills, with an elevation of temperature to from 101 to 103 F., with aching throughout the body, accompanied sometimes by a headache—symptoms such as accompany the onset of a severe cold or influenza. Rarely is there nausea or diarrhea.

After the subsidence of the local manifestations there may remain a slight nodule, which, however, disappears in about two weeks, leaving no mark to show where the vaccination has been done.

The constitutional symptoms appear in two or three hours in mild reactions, and disappear in from twelve to twenty-four hours; in severe reactions the symptoms last for from forty-eight to seventy-two hours. In children, the constitutional symptoms are usually less marked than in adults.

A great deal has been said about the so-called negative phase. This has reference to an increased susceptibility to typhoid fever during the first two or three weeks after the inoculation has been made. The alleged presence of this so-called negative phase has been used as an argument against the general adoption of the inoculations, but Wright has demonstrated conclusively that this may be prevented by avoiding a large dose, and the dose of one billion bacilli is not so large as to cause this temporary increased susceptibility to the infection.

The injections are best given in the late afternoon, so that the patient may retire early in the evening, and the greater part of the unpleasant symptoms from the reaction, in a mild case, may disappear during the following morning.

A considerable number of statistics have been reported by various observers, and especially through Wright, of England, concerning the results of these inoculations in various parts of the world, and especially in the British and United States armies. Comparing, in the same regiment or groups of regiments, the men who have been inoculated with those who have not been inoculated, it has been observed uniformly that fewer cases of typhoid fever have occurred among the inoculated men than among those who have not been inoculated. Still more striking is the observation on the mortality of typhoid fever. The mortality of the small proportion of inoculated men who suffer from typhoid fever is very much less than the mortality among the uninoculated men.

These various statistics would seem to prove conclusively the usefulness of inoculation in diminishing the number of cases of typhoid fever, and still more in diminishing the mortality among those affected with the disease.

What is the significance of the facts thus set forth to the general practitioner? Is it his duty to advise all who consult him to subject themselves to antityphoid vaccination? Does he not show himself guilty of negligence which is deserving of severe criticism, if he does not do so? Certainly, to-day neither the members of the medical profession nor the citizens of the country have been educated up to the point where the conscientious physician can reasonably be expected to advise his patients to submit to antityphoid inoculation, however thoroughly he may be convinced of its usefulness. With regard to certain classes in the community there can be no question of the advisability of these inoculations. It is recognized by all that the disease occurs with the greatest frequency among youths and young adults. Consequently, it is with reference to these that the problem is most urgent.

One class of young adults with regard to whom the sentiment is pretty well formed that vaccination should be done, consists of soldiers who are about to engage in war. As is well known, typhoid fever is especially prevalent in armies during military campaigns; consequently, all soldiers who are about to enter on a campaign should receive inoculations, and at present a large number of them are getting it.

Perhaps the next class in the community which is especially exposed to the danger of contracting typhoid fever includes the permanent attendants on sick people in general hospitals, viz., the nurses, the orderlies, and the resident medical staff. It may be fairly said that at present those in authority are liable to be censured if they do not insist on these individuals receiving typhoid inoculations, unless it may be those in hospitals where typhoid fever is never treated. How many such hospitals are there?

Perhaps the next classes to be considered are young men and women who leave home to go to college or boarding school, people who make long trips away from home, and people who take summer recreation trips. As is well known, typhoid fever is common among the people of these classes, and it would no doubt be wise if all such persons should submit to antityphoid vaccinations before leaving their homes. Were this done, unquestionably many cases of the disease would be prevented, and many deaths avoided.

Finally, taking up the rest of the community, there seems to be no reason to doubt that, except in those parts of the country where typhoid fever is unknown and where the people never leave their homes, it would conduce to the avoidance of the disease and the prevention of death from it, if everyone submitted to an inoculation.

The period during which the protection against the disease persists is not definitely established. It seems to be pretty well proved that the protection is effective for at least two years, and there is very strong reason for believing that a considerable degree of protection, though not so complete protection, is afforded for many years, or even during the rest of the individual's life.

When sanitation has entirely stamped out the disease, these inoculations of course will be superfluous; until that time arrives there is every reason to believe that they will be advised with increasing frequency by conscientious physicians and will be increasingly demanded by people who intend to avoid sickness and death from typhoid fever.

THE SPECIFIC TREATMENT OR SEROTHERAPY OF TYPHOID FEVER

Thirty or forty years ago, at the time when Ziemssen's monumental cyclopedia of medicine became known to American readers, the term "specific treatment" as applied to typhoid fever was used to indicate the administration of large doses of calomel during the early part of the disease. Since the discovery of the *Bacillus typhosus* and the active work of bacteriologists on typhoid fever, the term has been applied to those forms of treatment in which it was attempted to make use of a serum in the treatment of the disease.

No treatment of this character at all comparable to the serum used in the treatment of diphtheria has, up to the present, been found for typhoid fever, although great effort has been expended in trying to discover such a serum.

The one concerning which the most favorable reports have been made and which seems to have accomplished the most is that used by Chantemesse, of Paris. He began the administration of his antityphoid fever treatment in 1892, but his results were not successful until, in 1899, he produced a soluble typhoid toxin. From this he was able to produce his antityphoid serum. The serum which he employs is obtained from horses immunized by injections of the soluble typhoid toxin. This serum he uses in doses of from 10 to 12 c.c. at first, and if the temperature does not fall within a week, 4 or 5 c.c. more are injected. In connection with the serum he employs cold baths. In his reports he states that the average mortality in the other hospitals of Paris is 18 per cent., while in those under his charge among the patients treated by his serums and baths, the mortality is reduced to 4 per cent.

The manufacture of this serum is so difficult and the expense of obtaining it is so great, that it has not been extensively used in this country, and consequently American physicians are not prepared to express an opinion in regard to its use, or to administer it to patients.

Chantemesse maintains that the best results are obtained when the remedy is administered early, during the first week of the disease.

He reports that after the injection of his serum there is at first a period of reaction, when the temperature in some cases is elevated. This may last for from a few hours to several days. Subsequently, the temperature falls gradually, and the pulse is slowed, the blood-pressure raised, the quantity of urine increased, and the patient feels decidedly more comfortable. The temperature continues to fall for ten or twelve days, and the patient soon goes on to rapid convalescence. Should the patient seem to remain at a standstill, a second injection may be required.

GENERAL MANAGEMENT AND DIET

This subject was discussed in THE JOURNAL, Oct. 10, 1908, page 1233; Sept. 4, 1909, page 800; Oct. 15, 1910, page 1381.

THE PROTECTIVE TREATMENT OF THE HEART AND BLOOD-VESSELS DURING AND AFTER AN ATTACK

Everyone is familiar with the striking impression which typhoid infection makes on the heart during the course of the disease, and of the degenerative changes in the cardiac muscle which are found on post-mortem examination of that organ. It is not strange, in the case of a disease which lasts so long and which produces these degenerate changes in the heart, that during and following convalescence the heart should often be found to be profoundly affected.

The cardiac and vascular changes which are found after typhoid fever during the months and years following convalescence are of several kinds. It is well known that during the course of the disease pericarditis is a rare complication. Frequent cardiac murmurs are discovered during the later weeks of the disease. In many cases these disappear during convalescence, but if patients are examined from five to ten years after having experienced an attack of typhoid fever, it will be found that in the majority of these individuals the blood-pressure is considerably higher than in individuals of the same age who have not had typhoid fever. It will also be found that the radial arteries are palpable in a far larger proportion of persons who have had typhoid fever than in those who have not. Further, the average size of the heart is greater among those who have had typhoid fever than in those who have not. Finally, it will be found that a larger proportion of persons who have had typhoid fever will have organic disease of the heart than of those who have not suffered from an infectious disease.

It is maintained by many observers of wide experience that, with the exception of rheumatism, no infectious disease is more likely to produce permanent damage to the heart than typhoid fever.

Bearing these facts in mind, it is the obvious duty of the physician who takes care of a patient with typhoid fever, to guard against these different forms of damage to the cardiac and vascular system. It is the realization of these different forms of cardiovascular damage which gives added importance to the enforcement of rest during convalescence. This rest is recognized as being important for the patient not only in preventing a relapse, but it should also be recognized as being important in preventing the development of any of these circulatory troubles. The rest should be enforced for considerably longer than has commonly been done. This does not mean that the patient should be kept in bed for an indefinite number of weeks after convalescence has been established, but it means that he should be limited in the amount of exercise which he takes, and that he should not be allowed to undertake severe physical or mental work until several weeks have elapsed after the establishment of convalescence, and until careful examination fails to show any disturbance of the circulatory organs. Such disturbance may be indicated by a rapid pulse and weak action of the heart, and by various disturbances of the peripheral circulation such as coldness of the feet or sweating at night.

As undoubtedly the food taken by an individual affects the nutrition of the heart and its action, the diet recommended should be such as will not tend to produce arteriosclerosis or increase vascular tension. The amount of protein undoubtedly should be limited, although a moderate amount of protein is essential for the restoration of the degenerated tissues. Milk and fruit should for a long time constitute an important part of the diet.

The patient should be kept in bed until the pulse regains its normal rapidity, and the amount of exercise that he is allowed to take should not be such as will increase the action of the heart beyond the normal rate. It is also important that the nervous system should not be subjected to unusual irritation, and he should avoid cares and worries as far as possible. Protracted rest and a simple diet are the essential features of this protective treatment.

NERVOUS, MENTAL AND SPINAL CONDITIONS

Perhaps one of the most striking results of the progress which has been made during the last few decades in the treatment of typhoid, is the diminution of the frequency and severity of the nervous phenomena observed during the course of the disease. The so-called typhoid condition characterized by a dry and brown coated tongue, lips and teeth covered with sordes, dull and apathetic mind, or delirium, sometimes violent and sometimes busy, with muttering, muscular tremors, and subsultus tendinum, are comparatively rarely seen at the present day. Now other nervous phenomena are demanding attention, and among these may be mentioned changes in the mental condition both before and after the attack of the fever. Cases have been reported, chiefly in patients who had a defective mental inheritance or who themselves were not up to the average of mental development, in which the attack of typhoid fever has been preceded by maniacal delirium, which subsided with the onset of the fever. More frequently, but yet only occasionally, during convalescence various disturbances of the mind have been observed which are classed together as the psychoses of typhoid fever. In the initial delirium, motor excitement appears to be a constant feature, so that when an unexplainable attack of mania, accompanied by this motor excitement, occurs, it is well, if the patient is found to have any fever, to test his blood by the Widal method.

During convalescence, the common forms are the so-called collapse delirium, in which the patient imagines that he has been taken from his previous surroundings, that he is somewhere other than in the place where he really is, or there may be various forms of mania or melancholia. In addition to these, various forms of neurasthenic phenomena are frequently observed.

With a view to avoiding and preventing these postfebrile phenomena, the nervous system should be carefully watched during the course of the disease and such measures adopted as will quiet nervous restlessness and prevent loss of sleep. The most important of these methods is cold or tepid sponging, or other cold applications. When for any reason these are impracticable or ineffective, they may be supplemented by hypnotic drugs, such as the bromid of sodium, chloral, sulphonethylmethane (trional), or morphin. The last in small dose is often the best.

As soon as convalescence is fairly established, the nutrition should be rapidly improved by the addition of such food as the patient can digest and assimilate. The patient should maintain a condition of rest so long as there is any evidence of irritability or nervous instability. He should not be disturbed by visitors or by having business cares and worries brought to his attention.

The prognosis of these conditions and even of a mild insanity is, as a rule, favorable, and treatment at home may be continued for a greater length of time than in cases of ordinary insanity.

In connection with these nervous and mental disorders may be mentioned the condition described by Gibney as typhoid spine, which consists of an inflammation of the structures in and around the joint called by him perispondylitis. This condition is characterized by a great deal of pain in the spine, usually in the lumbar region, accompanied by swelling and tenderness of the boney structure of the affected region. It should be distinguished from a painful condition of the muscles on each side of the spine resulting from strain from the patient lying with his back not properly supported (often too soft bed-springs), also from the hypersensitive spine seen in neurasthenic patients and other functional troubles. The pain is sharp and shooting, relieved by lying flat on the back, but aggravated by any movement of the spine. The treatment consists of rest in bed, with counterirritation and massage. The patients as a rule recover.

THE HAIR IN TYPHOID FEVER

Typhoid fever in all the aspects of its symptomatology, pathology and treatment has been so voluminously discussed by so many teachers and writers that it is surprising to find in the literature relating to this disease so little definite information in regard to the occurrence of loss of hair and its prevention. In works treating of dermatology this matter is incidentally mentioned under the head of *alopecia prematura* or *presenilis*. To the condition here to be discussed the term *defluvium capillorum* is also applied.

Naturally, during the height of the fever when the physician is exercised in attempting to prevent the death of the patient, to relieve the fever, to maintain the circulation, and to keep up the general nutrition, it is not strange that a matter of so little life and death importance as the hair should be neglected; but after the fever has left the patient, after convalescence has become established, and when the patient walks around and receives the visits of friends, one of the most annoying symptoms in a large number of cases is the impending and active loss of the hair. This causes great annoyance, especially to female patients, and its causation and prevention are worthy of careful study by the physician.

The condition is undoubtedly associated with the defective nutrition of the entire body, and one of the most important measures for combating it is by improving the general nutrition. Of course, food stands in the first place in this regard, but it may be supplemented by medicinal treatment, and especially by the addition of moderate sized doses of arsenic, which is generally recognized as having a direct action on the nutrition of the skin, perhaps four or five drops of Fowler's solution, well diluted, three times a day, after eating. Calcium glycerophosphate is also of value.

Locally, the nutrition of the skin may be improved by massage with the application of a moderate amount of some oily substance, of which the best perhaps is the official adeps lanæ hydrosus. In addition, such remedies as stimulate the scalp are of considerable importance. Among the different preparations recommended for stimulation of the scalp are various solutions containing tincture of cantharides, various cinchona or quinin preparations, sulphur either suspended in solution or in various strength of ointments, oil of turpentine combined with bland oils, or with alcohol, and solutions containing ammonia or chloroform.

When the hair commences to fall out after an attack of typhoid fever, the question of cutting the hair or shaving the scalp is frequently raised. It is, of course, of great importance, especially if the patient is a woman, to retain the hair if possible. Certainly, no physician should advise cutting off the hair when it is luxuriant, and before advising it the local applications already enumerated should be tried. In severe cases, in which these measures are not successful, it unquestionably is beneficial to cut the hair. In the majority of cases this will stop the falling of the hair, and ultimately, new hair will grow, and the new growth will be of equal thickness with the original. Occasionally, perhaps, it may be slightly coarser.

THE LOS ANGELES SESSION

THE SIXTY-SECOND ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION TO BE HELD AT LOS ANGELES, JUNE 27-30, 1911

OFFICIAL CALL

TO THE OFFICERS AND MEMBERS OF THE CONSTITUENT ASSOCIATIONS OF THE AMERICAN MEDICAL ASSOCIATION

The sixty-second annual session of the American Medical Association will be held on Tuesday, Wednesday, Thursday and Friday, June 27, 28, 29 and 30, 1911, at Los Angeles, Cal.

The House of Delegates will convene at 10 a. m., Monday, June 26, 1911.

REPRESENTATION

In accordance with the reapportionment of delegates made at the Atlantic City Session of 1909, state associations are entitled to delegates for 1911-12 as follows:

Alabama	3	Louisiana	2	Oklahoma	2
Arizona	1	Maine	1	Oregon	1
Arkansas	2	Maryland	2	Pennsylvania	9
California	3	Massachusetts	6	Philippine Is.	1
Colorado	2	Michigan	3	Rhode Island	1
Connecticut	2	Minnesota	2	South Carolina	2
Delaware	1	Mississippi	2	South Dakota	1
Dist. Columbia	1	Missouri	5	Tennessee	3
Florida	1	Montana	1	Texas	5
Georgia	2	Nebraska	2	Utah	1
Hawaii	1	Nevada	1	Vermont	1
Idaho	1	New Hampshire	1	Virginia	3
Illinois	9	New Jersey	3	Washington	2
Indiana	4	New Mexico	1	W. Virginia	2
Iowa	3	New York	11	Wisconsin	3
Canal Zone	1	North Carolina	2	Wyoming	1
Kansas	2	North Dakota	1		
Kentucky	4	Ohio	7		

The twelve sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy and the Public Health and Marine-Hospital Service are entitled to one delegate each.

EXTRACTS FROM BY-LAWS

The following quotations from the By-Laws of the American Medical Association are given in this connection, for their bearing on the qualifications of delegates, their election and their time of service.

"No one shall serve as a member of the House of Delegates who has not been a member of the American Medical Association for at least two years."

"Delegates and alternates from constituent associations shall be elected for two years. Constituent associations entitled to more than one representative shall elect them so that one-half, as near as may be, shall be elected each year. Delegates and alternates elected by the sections, or delegates appointed from the United States Army, United States Navy and United States Public Health and Marine-Hospital Service, shall hold office for one year."—Chap. III, Secs. 1 and 2, By-Laws.

GENERAL MEETING

The General Meeting which constitutes the opening exercises of the scientific functions of the Association will be held at 10:30 a. m., Tuesday, June 27, 1911.

REGISTRATION DEPARTMENT

The Registration Department will be open from 8:30 a. m. until 5:30 p. m. on Monday, Tuesday, Wednesday and Thursday, June 26, 27, 28 and 29, and from 9 to 10 a. m. on Friday, June 30, 1911.

WILLIAM H. WELCH, Baltimore, President.
GEORGE H. SIMMONS, Chicago, Secretary.

LOS ANGELES

MEETING PLACE OF THE SIXTY-SECOND ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION

Only three times in the past has the American Medical Association held its meeting on the Pacific slope, the past meeting places having been San Francisco in 1871, Portland in 1905 and San Francisco in 1894. This will be the first time that a session has been held in Los Angeles.

For the better information of those who anticipate being present at the Sixty-Second Session of the Association, a description * of the city and its attractions, the surrounding points, coast resorts, etc., will be of interest.

Los Angeles, the City of the Angels

There are few cities in the United States that have had such a remarkable and varied career as Los Angeles, the chief city of southern California, and the commercial metropolis of the southwest section of the United States. Few cities of this size, moreover, are so well known throughout the length and breadth of this country, as well as abroad. The rapid growth of Los Angeles, from an insignificant semi-Mexican town to a metropolitan city, has been told and retold, until it is familiar in a general way to millions of Americans, while the attractions offered by the city to health-seekers, pleasure-seekers and tourists have been spread abroad by hundreds of thousands of visitors who, after one trip to this section, are usually anxious to return, frequently becoming permanent residents.

Population

During the past thirty years Los Angeles has grown from population of 11,000 in 1880, to 319,198 by the census of 1910. There are three leading features that have contributed to such growth. These are climate, soil and location. Any one of these advantages would be sufficient to build up a large city, but taken together they insure the future of Los Angeles as the metropolis of the southwest.

Name and Origin

The original name of the pueblo or town of Los Angeles, following the custom that then prevailed among the Latin races of giving religious names to places, was Nuestra Senora de Los Angeles, sometimes written Nuestra Senora la Reina de Los Angeles—Our Lady, the Queen of the Angels. This has been shortened by the practical Yankees to Los Angeles. Los Angeles was founded on Sept. 4, 1781, by a small band of forty pablodores or colonists, who had been recruited in the Mexican states of Sinaloa and Sonora, and brought here under command of a government officer, to found an agricultural colony, for the purpose of raising produce for the soldiers at the presidios. The first census of the little city, taken in August, 1790, gave the total population as 141. They were a mixed class, composed of one European, seventy-two Spanish-Americans, seven Indians, twenty-two mulattoes and thirty-nine Mestizos. As recently as 1831, fifty years after the founding of the pueblo, the population was only 770. In January, 1847, the population was 1,500. It began to grow rapidly about 1880, and has continued until it has reached the figures quoted above.

* Information for this article was furnished by George H. Kress, M.D., secretary-general of the Los Angeles Committee of Arrangements.

Streets

Considering that twenty years ago it had not a single paved street, Los Angeles has made remarkable progress in street improvements. There are now over 450 miles of graded and graveled streets, 63 miles of paved streets and 320 miles of sewer. Los Angeles has a complete sewer system, including an outfall sewer to the ocean.

Lighting

At night Los Angeles presents a brilliant appearance. It was the first city in the United States entirely to abandon gas for street lighting, and to replace it by electricity, which was done twenty-five years ago, and it is now one of the best lighted cities in the Union. Many of the lamps are on high masts. Seen from one of the surrounding hills, the view of the city at night is most beautiful and striking. Broadway and Spring streets are now lighted their entire length by clusters of electric lights on handsome iron electroliers, 100 feet apart, paid for by the property owners, the city supplying the "juice." A similar lighting scheme has been installed on Main Street to Tenth, a distance of ten blocks, and also on Hill Street to Pico, a distance of thirteen blocks.

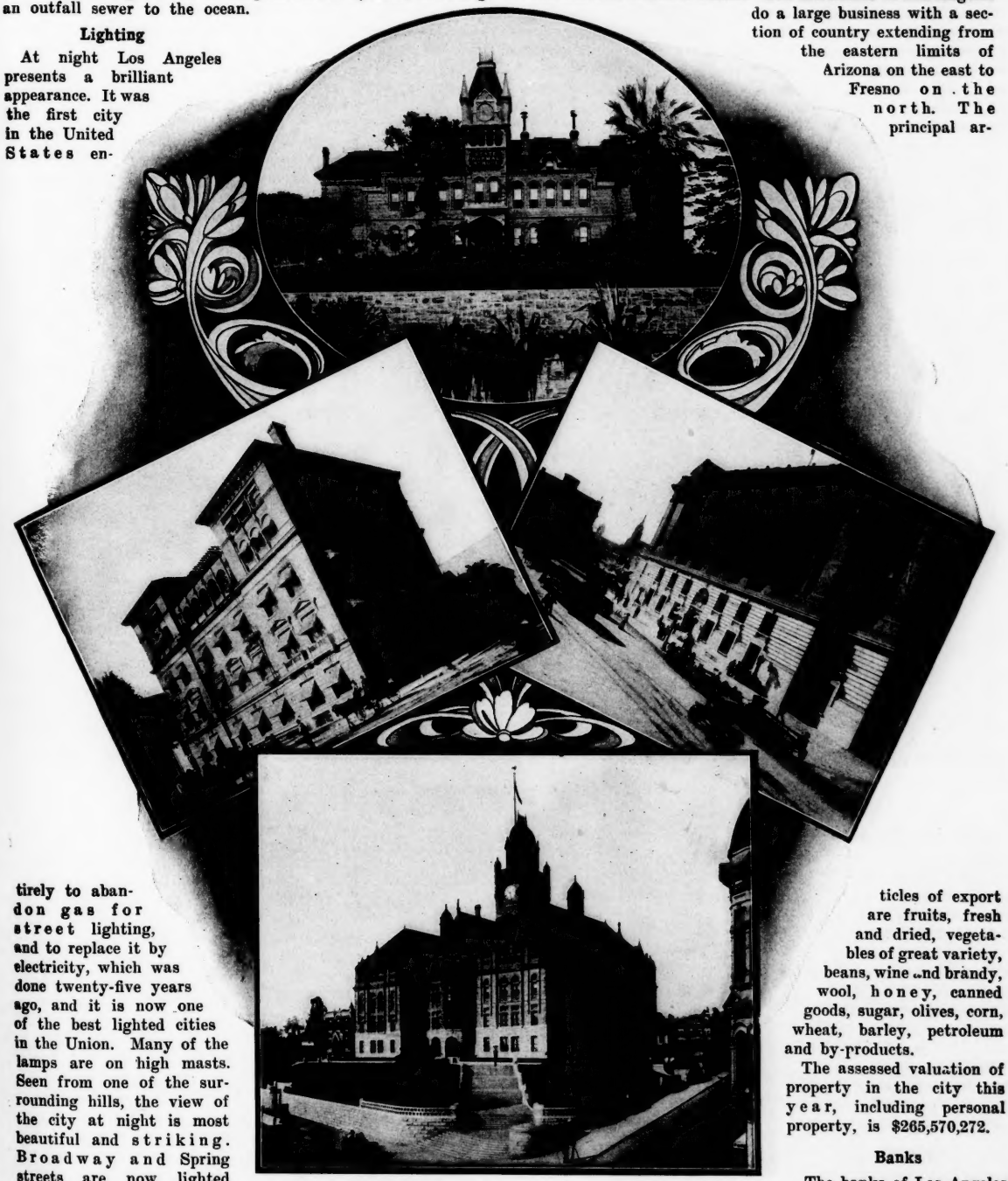


Fig. 1.—Public buildings in Los Angeles: State Normal School at the top, the Postoffice at the right, the California Club at the left, and the Court House at the bottom.

Business

That Los Angeles is and will always remain the commercial metropolis of southern California admits of no doubt. The city possesses the great natural advantage of being located on the shortest route, by the easiest grades, between the Pacific and the Atlantic oceans. The merchants of Los Angeles do a large business with a section of country extending from the eastern limits of Arizona on the east to Fresno on the north. The principal articles of export are fruits, fresh and dried, vegetables of great variety, beans, wine and brandy, wool, honey, canned goods, sugar, olives, corn, wheat, barley, petroleum and by-products.

The assessed valuation of property in the city this year, including personal property, is $265,570,272.

Banks

The banks of Los Angeles are noted throughout the country for their solid and prosperous condition, with deposits aggregating $102,000,000. The clearings of the Los Angeles city banks for the year 1908 amounted to $505,588,756. Los Angeles has been leading all cities in the United States in increase of bank clearings.

Railroads

Los Angeles possesses the advantage of four transcontinental lines. These are the "Sunset Route" of the Southern Pacific, by way of El Paso and New Orleans, the Ogden route of the same company, connecting with the Central and Union Pacific, the Sante Fe route, by way of Albuquerque, and the San Pedro, Los Angeles and Salt Lake Railroad, the operation of which began May 1, 1905, opening up a comparatively unknown section in southern Utah and Nevada, which is wonderfully rich in precious and useful minerals. The Southern Pacific has two lines between Los Angeles and San Francisco—one through the San Joaquin Valley and the other along the coast. The Santa Fe also connects with San Francisco via Barstow, in San Bernardino County. Altogether, there are over a dozen lines of railway centering in Los Angeles. The Pacific Coast Steamship Company runs vessels regularly from Los Angeles County ports to San Francisco on the north and San Diego on the south.

Harbor

Reference is made elsewhere to the work of the national government on a deep-water harbor at San Pedro. This work, when completed, will give a great impetus to foreign commerce, and Los Angeles should before long become an important point for Oriental trade.

When the Isthmian canal is constructed the coast of Los Angeles County will be on the direct course of steamships sailing from the Atlantic coast and from European to Asiatic ports. It will also furnish a greatly enlarged market for the horticultural products of this section.

Parks

There are a dozen public parks within the city limits, aggregating over 600 acres, of which six are of considerable size. Westlake Park, 35 acres in area, on the Seventh Street car line, is one of the most popular open-air resorts, and is in the heart of a splendid residence section. It has a lake with boats, fine drives and extensive views from the adjacent hills. Eastlake Park, in East Los Angeles, covers 50 acres, and has been made attractive. Here also is a lake and the park nurseries and a menagerie. Prospect Park on Boyle Heights is a small but beautiful place, with many choice trees and shrubs. The oldest and best improved of the city parks, on Sixth Street, not far from the business center, is known as Central Park. The trees have attained a large growth. Hollenbeck Park is a tract of about 20 acres, on the east side of the river, on Boyle Heights. It has been improved with shade trees and a small lake. Echo Park, a beautifully improved tract in the northwestern part of the city, contains the largest body of water in Los Angeles.

Elysian Park, 500 acres in area, is a remnant of the thousands of acres of such land which the city formerly owned. It may safely be said that this tract offers the greatest possibilities for diversity of growths of any piece of ground within the limits of an American municipality. Much of the land is within the frostless belt. The views of mountains, valley and ocean, city and plain are grand in the extreme.

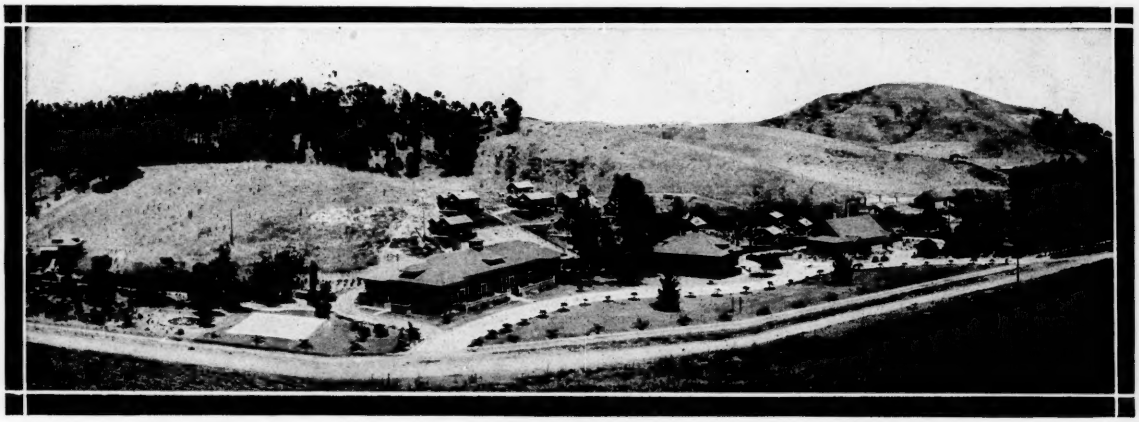


Fig. 2.—View of the Barlow Sanatorium for the Poor Tuberculous of the County of Los Angeles.

Street Railways

The street railway system of Los Angeles is excellent. There is probably no city of the size in the United States that has a more modern or a better equipped system. The total mileage of single track is over 300 miles, all electric. There are suburban electric lines to the ocean beach towns, Santa Monica, by two different routes; to Redondo, also by two routes; to Port Los Angeles, Long Beach, Newport, Huntington Beach, Naples and San Pedro, and to inland towns, Pasadena and Altadena, Alhambra, San Gabriel and Monrovia, Whittier, Azusa, Glendora, Sierra Madre, Covina, La Habra, Glendale and Santa Ana in the fruit country. The suburban electric railroads radiating from Los Angeles aggregate 767 miles of single track. They are almost all double track. Some have four tracks.

Building

For a dozen years past Los Angeles has been the scene of great activity in building operations. Scores of fine business blocks and hundreds of handsome residences have been built. The value of the building permits issued in Los Angeles during the year 1908 amounted to $10,000,000. The actual value of the buildings was much larger.

What has been said in regard to Elysian Park is true of Griffith Park, a tract of 3,000 acres, donated to the city. It is located about a mile north of the city limits, and embraces a varied assortment of mountain, foothill and valley scenery. A boulevard to connect the parks of Los Angeles has been commenced. The large tract of land in the southwest part of city, known as Exposition Park, was recently made part of Los Angeles. Plans have been prepared to make this a handsome and attractive park. A museum, an armory and a mammoth exposition hall are being erected.

Los Angeles has now seven regular public playgrounds and four vacation or summer centers. The cost of maintaining the playgrounds during the past year was $42,000. The public library maintains a branch at three of the regular playgrounds. During the winter months a series of free lectures and entertainments is given.

Homes

After all is said, the chief attraction of Los Angeles to new arrivals lies in its beautiful homes. The rare beauty of the grounds surrounding the attractive homes of Los Angeles, Pasadena and other Los Angeles County cities is a constant theme of admiration on the part of eastern visitors. Other cities may show greater business blocks, but when it comes to gardens, Los Angeles is *facile princeps*. The mildness of the climate permits the most delicate plants and trees to flourish in the open air all through the winter.

A great variety of architecture is found among the residences of Los Angeles. The picturesque and comfortable early mission style, which should have been more extensively adopted long ago by the American settlers, is at length coming into vogue. Some of the more pretentious of these mission residences have spacious tiled courtyards, covered with glass, in which fountains splash, flowers bloom and birds warble.

Another comfortable and artistic style of residence that has become exceedingly popular during the past few years is the bungalow, adapted from India—a cottage of one or one and one-half stories, with from three to seven rooms, built of lumber and shingled, with wide eaves.

Fig. 3.—A group of Los Angeles hospitals: Pacific Hospital above to the left, the Sisters' Hospital at the right, and the California Hospital below.

It costs less to build in southern California now than it did in the early days. Again, a $10,000 residence here is practically as good as a $20,000 residence in the east.

One of the most attractive features about a home in this section is the wonderful rapidity with which vegetation of all kinds grows, so that instead of having to wait years for a new residence to assume a settled and homelike appearance, the owner has to wait only a few months until his house is surrounded with thrifty plants and climbing vines, while even some trees, such as the eucalyptus, grow to a respectable size within a year, and can be planted around the lot while less rapidly growing trees are attaining size, thus obviating the bare hard appearance attaching to new residences in less favored climates, however beautiful architecturally the building may be.

A Cosmopolitan Place

The population of Los Angeles is cosmopolitan. During the past twenty years it has received accessions to its population from every state in the Union and from almost every country in the world. For instance, a statement published in the Los Angeles *Times* showed that, a few years ago, of the 53,413 voters then on the register of Los Angeles County, only 5,244, or less than 10 per cent., were natives of California.

Water-Supply

The most notable thing that has ever happened to the city of Los Angeles is the acquirement by the city of water rights, extending for many miles along the banks of the Owens River, in Inyo County. This water will be brought to the city a distance of 220 miles, by means of an aqueduct and more than 20 miles of tunnels. Work is now rapidly progressing and will be completed in 1912. This will give Los Angeles a supply of pure water from the snow-clad sides of the highest mountain in the United States, sufficient for a population of 2,000,000, so that not only can the city be amply supplied for many years, but there will be enough surplus to irrigate about all the available land in the county. Not only this, but the water will furnish an immense amount of power for electric lighting and for power for factories. The cost of this great enterprise is estimated at $25,000,000. The bonds were carried by a vote of ten to one.

Climate

Decidedly the chief attraction of southern California is its climate. This is the feature that brings three-fourths of the eastern visitors to southern California.

Southern California—that is, the section we have indicated, especially including Los Angeles—has an "all-the-year-round" climate. This is a rare and inestimable feature, possessed by very few sections of the world. It is well to insist specially on this point, because very erroneous ideas prevail on the subject in the east, where it is generally believed, among those

who have not spent an entire year with us, that the whole of California is a counterpart of hades during the summer—a veritable fiery furnace, as its name would indicate. Strangers have yet to learn that California includes within its limits almost as great a variety of climates as may be found in the world. Take, for instance, an August afternoon in San Francisco and at Indio in the Colorado desert. In the former place the inhabitants will be found attired in heavy overcoats and sealskin wraps, or seated around large open coal fires; at the latter a thin shirt and overalls are too warm for comfort. Los Angeles occupies a happy position between these two extremes, and our climate is shared, with slight variations, by the suburbs for 20 miles around, becoming somewhat moister and cooler toward the ocean, dryer and warmer toward the mountains.

The winter season is marked by the rains, which come between November and April. This is really the spring, when the grass and flowers mantle the hills. Usually the rain storms do not last more than two or three days at a time, with frequent spells of fine weather lasting ten days or more. The rainfall at Los Angeles for the past twenty-five years averaged about 16 inches, the lowest being 5.53 and the highest 38.13. Thunderstorms are very rarely experienced and cyclones are unknown. During the year an average of 316 days will be found with cloudless skies or when the sun is but partly obscured.

For a few days in summer the mercury rises high in Los Angeles, yet, owing to the dryness of the atmosphere, 100 degrees of heat is less oppressive than 80 degrees in New York. The cool trade wind from the Pacific is felt nearly all summer, and is the great modifier of the heat, rendering the hottest day bearable. In winter the modifying influences of a warm return current from the south are enjoyed, which, south of Point Conception, takes the place of the Pacific Gulf stream, the Japanese current Kuro-Shiwo, which sweeps down the Pacific Coast. This explains why the water at Santa Monica has a temperature of 61 degrees in January, while that of Newport on the Atlantic at the same time is 32 degrees.

Fig. 4.—The Hamburger Building, Eighth and Broadway, where will be found the Registration Bureau, Post Office, Telegraph Office, Scientific Exhibit, Commercial Exhibit, and also the roof garden, where the general smoker will be given.

Facts About Los Angeles

Center of great oil-producing fields, as it also is of the great orange belt.

City will spend $10,000,000 on San Pedro harbor, already one of the best on the Pacific Coast.

Wholesale trade with the southwest, including Mexico, exceeds $300,000,000 a year and growing rapidly.

Shopping district compares favorably with any in the large eastern cities.

Local general colleges are the University of Southern California, Occidental College, Throop Polytechnic Institute (Pasadena), Pomona College (Pomona), and University of Redlands (Redlands).

Local medical colleges are two: the State University Medical Department (Los Angeles Branch), which gives instruction in the last two years only, the first two years' instruction being given at Berkeley; and the College of Physicians and Surgeons of the University of Southern California, which gives the regular four years' course.

Churches, all denominations, 225; public schools, 117; teachers employed, 1,440; school children census, 53,954; enrolment, 50,000; miscellaneous private schools and colleges, 40.

Public library contains 137,184 volumes, home circulation, 773,572. In addition, there are other libraries in the city with total of 103,643 volumes.

A resort both winter and summer, and one of the busiest and most enterprising cities in the United States, as it also is one of the most beautiful.

A dozen resorts on the Pacific Ocean may be reached within forty minutes by trolley and steam lines.

There are more than sixty cities and towns within two hours' ride of Los Angeles, having populations ranging from 500 to 40,000.

Short Trips from Los Angeles

The following comprise only a few of the trips that may be made from Los Angeles in a couple of days or less:

HALF-DAY TRIPS

Santa Monica, Ocean Park, Venice.

Terminal Island, Long Beach, San Pedro.

Redondo Beach, Hermosa, Manhattan, Playa del Rey.

Baldwin's Ranch, San Gabriel Mission.

Ostrich Farm, Soldiers' Home, Pasadena, Whittier, Hollywood and Cahuenga Valley.

Observation Car over the Los Angeles Railway.

ONE-DAY TRIPS

Mount Lowe; electric road and cable incline.

"Kite-Shaped Track" of the Santa Fe System, including stops at Riverside and Redlands.

"Inside Track" of the Southern Pacific, including stops at Pomona, Ontario, Redlands and Riverside.

"Orange Grove Trips" of the Salt Lake Route, with stop at Riverside and by trolley to Redlands.

"Balloon" trip of the Los Angeles-Pacific.

Tilton's Trolley Trip, Pacific Electric.

"Surf" trip of the Pacific Electric Railway.

Santa Ana, Orange, Tustin and surroundings.

Oil wells of Whittier, Fullerton and Puente.

Monrovia, Duarte, Azusa and Glendora (heart of San Gabriel Valley).

San Buenaventura, San Juan Capistrano Mission.

Santa Catalina Island, Santa Barbara.

TWO-DAY TRIPS

Wilson's Peak; railroad, electric, stage and burros; Elsinore.

San Luis Rey Mission; railroad and stage.

San Diego, Coronado Beach and Mexican line.

San Diego may be reached by railroad or by the Pacific Coast steamship line, by large, modern boats, sailing three times a week from San Francisco, and touching at Los Angeles Harbor. The distance is 120 miles and takes about seven hours.

THE SCIENTIFIC PROCEEDINGS

The Papers to Be Read at Los Angeles—The Preliminary Program and the Official Program

The following is a partial list of titles of papers to be read before the various sections. The order here is not necessarily the order which will be followed in the Official Program. This Official Program will be a pamphlet similar to those issued in the previous years, and will contain the final program of each section, with abstracts of the papers, lists of committees, programs of the General Meeting and of the meetings of the House of Delegates, lists of entertainments, map of Los Angeles, etc. To prevent misunderstandings and to protect the interests of advertisers, etc., it is here announced that this Official Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each member on registration.

SECTION ON PRACTICE OF MEDICINE

CHAIRMAN, ALLEN A. JONES, BUFFALO, N. Y.; SECRETARY, WILDER TILESTON, NEW HAVEN, CONN.

Clinical Phases of Arteriosclerosis (15 minutes).
THOMAS D. COLEMAN, Augusta, Ga.

Verruca Peruana or Carrion's Disease (15 minutes).
H. A. GILTNER, U. S. Navy.

Epidemiology of Pneumonia (10 minutes).
C. M. RICHTER, San Francisco.

Successful Treatment of a Typhoid Bacillus-Carrier by Vaccination (10 minutes).
WALTER BREM and F. C. WATSON, Cristobal, Canal Zone.

Causation and Treatment of Fever in Tuberculosis (10 minutes).
F. M. POTTENGER, Monrovia, Cal.

Streptothrix (Actinomycosis) of the Lungs (15 minutes).
NORMAN BRIDGE, Los Angeles.

Hemorrhagic Erosions of the Stomach (10 minutes).
N. W. JONES, Portland, Ore.

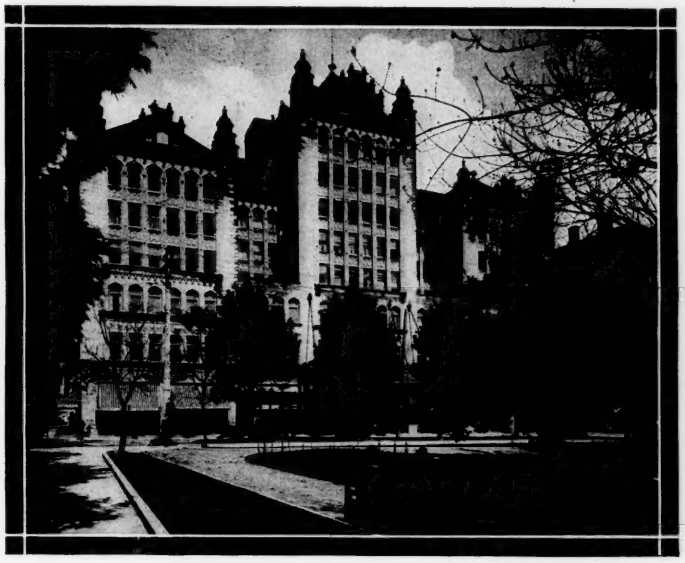


Fig. 5.—The Baptist Temple and Auditorium, Fifth and Olive Streets, where the general meeting will be held. Here also are halls for the meetings of the Section on Surgery, Section on Obstetrics and Diseases of Women, and Section on Preventive Medicine and Public Health.

Immuno-Diagnostics in Internal Medicine (15 minutes).
W. J. BUTLER, Chicago.

The Leukocytology of Typhoid and Paratyphoid Fevers (10 minutes).
J. F. HULTGEN, Chicago.

Effects on Secondary Anemia by Hypodermic Injections (10 minutes).
W. JARVIS BARLOW, Los Angeles.

Reserve Renal Capacity in Chronic Interstitial Nephritis (10 minutes).
EDWARD F. WELLS, Chicago.

Pathologic Findings in Hypertension (10 minutes).
ROGER I. LEE, Boston.

Myatonia Congenita (Oppenheim); Report of a Case with Autopsy (15 minutes).
W. T. COUNCILMAN and C. H. DUNN, Boston.

New Clinical Values in the Treatment of the Gastric Neuroses (15 minutes).
CHARLES L. GREENE, St. Paul, Minn.

Infantilism with Disease of the Pituitary Gland (15 minutes).
A. W. HEWLETT, Ann Arbor, Mich.

Importance of Quantitative Regulation of Diet (15 minutes).
H. D. ARNOLD and R. C. LARRABEE, Boston.

Pleurisy and Empyema in Pneumonia (10 minutes).
J. M. ANDERS, Philadelphia.

Value of So-Called Digestants in Preparation of Materials to be Examined for Acid-Fast Organisms (particularly Tubercle Bacilli), with Clinical Results of Two Years' Study of "Antiformin" (10 minutes).
FRANK SMITHIES, Ann Arbor, Mich.

Experimental and Clinical Studies of a Modified Vaccine Treatment of Pneumococcus Infections in Animals and Man (20 minutes).
S. P. BEEBE, New York, and P. K. BROWN, San Francisco.

SYMPOSIUM ON SYPHILIS

Laboratory Diagnosis of Syphilis (15 minutes).
L. S. SCHMITT, San Francisco.

Visceral Syphilis (20 minutes).
FRANK BILLINGS, Chicago.

Value of the Wassermann Reaction and of Salvarsan (15 minutes).
ALBERT KEIDEL, Batimore.

Disadvantages Incident to the Administration of Salvarsan (10 minutes).
D. W. MONTGOMERY, San Francisco.

Adequate Treatment of Syphilis (15 minutes).
W. T. WOOTTON, Hot Springs, Ark.

Salvarsan (10 minutes).
E. G. BALLENGER, Atlanta, Ga.

Treatment of Diabetes (15 minutes).
A. J. HODGSON, Waukesha, Wis.

Early Diagnosis of Hyperthyroidism (15 minutes).
JOHN A. WITHERSPOON, Nashville, Tenn.

Bubonic Plague with Special Reference to that of Ground Squirrel Origin (15 minutes).
G. W. McCOY, San Francisco

Treatment of Intestinal Amebiasis (15 minutes).
W. E. MUSGRAVE, Manila, Philippine Islands.

Experimental Work on Intestinal Auto-Intoxication (20 minutes).
J. W. D. MAURY, Rochester, Minn.

Some Obscure Conditions of the Digestive Tract as Studied by the Roentgen Ray (20 minutes).
G. R. SATTERLEE and L. T. LEWALD, New York.

Availability of Roentgen Rays in the Clinical Study of the Pancreas (10 minutes).
A. W. CRANE, Kalamazoo, Mich.

Oration in Medicine: A Clinical Study of Disturbances in Rate and Rhythm of Respiration.
C. F. HOOVER, Cleveland, Ohio.

Relation of the Symptomatology and Pathology to Operative Mortality in Exophthalmic Goiter (10 minutes).
H. S. PLUMMER, Rochester, Minn.

Mobility of the Heart.
DUDLEY FULTON, Los Angeles.

SYMPOSIUM ON POLIOMYELITIS

Joint Meeting With the Section on Diseases of Children

Epidemiologic and Etiologic Studies of Acute Poliomyelitis in Pennsylvania (20 minutes).
SAMUEL G. DIXON, Harrisburg, Pa., and H. T. KARSNER, Philadelphia.

Recent History and Etiology of Infantile Paralysis (20 minutes).
R. W. LOVETT and M. W. RICHARDSON, Boston.

Pathology, Symptomatology, Diagnosis, Prognosis, Prophylaxis and Treatment of Infantile Paralysis (20 minutes).
R. W. LOVETT and M. W. RICHARDSON, Boston.

Infantile Paralysis as Observed in Massachusetts, 1907-1910 (20 minutes).
R. W. LOVETT and M. W. RICHARDSON, Boston.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN

CHAIRMAN, H. G. WETHERILL, DENVER; SECRETARY, C. JEFF MILLER, NEW ORLEANS

Chairman's Address: Retrospection and Introspection: Our Opportunities and Obligations.
H. G. WETHERILL, Denver.

Carcinoma of the Clitoris and Report of Case.
CHARLES D. LOCKWOOD, Pasadena, Cal.

Torsion of a Subserous Pedunculated Fibroid Complicating Pregnancy at Four and One-Half Months. Operation; Recovery with Delivery at Term.
E. M. LAZARD, Los Angeles.

Adiposity of the Mammary Glands.
J. R. GUTHRIE, Dubuque, Iowa, and HENRY ALBERT, Iowa City, Iowa.

The Exciting Causes, Means of Prevention and Early Treatment of Cancer of the Uterus.
A. E. BENJAMIN, Minneapolis.

Hemorrhagic Degeneration in Myomas.
ARTHUR E. HERTZLER, Kansas City, Mo.

Introduction and Development of Antiseptic Surgery in America.
HENRY O. MARCY, Boston.

Parametritis Posterior and its Associated Reflex Disturbances.
FRED J. TAUSSIG, St. Louis.

Prevention of Postoperative Gynecologic Psychoses.
H. P. COLE, Mobile, Ala.

Value of Pyelography. W. F. BRAASCH, Rochester, Minn.

Postoperative Urinary Retention and Cystitis.
J. H. JACOBSON and J. G. KELLER, Toledo, O.

Pericystitis. M. L. HARRIS, Chicago.

Removal of Ureteral Calculi by Cystoscopic Methods.
BRANSFORD LEWIS, St. Louis.

Pathologic Kinks and Adhesions in the Terminal Portion of the Ileum. FRANKLIN H. MARTIN, Chicago.

Treatment of 140 Consecutive Cases of Uterine Myoma
WALTER B. DORSETT, St. Louis.

Surgical Treatment of Ptosis of Abdominal Organs by Hammock Operation. R. C. COFFEY, Portland, Ore.

Essential Points in Round-Ligament Surgery.
CHANNING W. BARRETT, Chicago.

Use of the Pessary in Retroversion of the Uterus and the Mechanism of its Support. J. RIDDLE GOFFE, New York.

Utero-Vaginal Prolapse in Elderly Women.
GEORGE B. SOMERS, San Francisco.

Relation of Appendicitis to Adnexal Inflammation of the Right Side. H. J. BOLDT, New York.

Special Considerations in the Surgical Treatment of the Female Pelvic Organs.
HENRY PARKER NEWMAN, San Diego, Cal.

Proper Operative Period and Methods of Drainage in Pelvic Infections. L. G. BOWERS, Dayton, O.

The Employment in Abdominal Surgery of Two Rubber Drainage Tubes with a Single Stab Wound Exit, Instead of a Single Tube with Exit by Incision or Otherwise Wherever Drainage is Desired.
PHILANDER A. HARRIS, Patterson, N. J.

Postoperative Complications. F. F. SIMPSON, Pittsburg, Pa.

Two Years' Experience with Vaccine in Obstetric and Gynecologic Infections. JOHN O. POLAK, Brooklyn, N. Y.

Primary Carcinoma of the Fallopian Tube.
E. E. MONTGOMERY, Philadelphia.

Prolapse of the Gravid Uterus.
PALMER FINDLAY, Omaha, Nebr.

Pernicious Vomiting of Pregnancy.
C. B. INGRAHAM, Denver.

Tuberculosis and Pregnancy.
GEORGE C. MOSHER, Kansas City, Mo.

A Study of Cholecystitis and Cholelithiasis in Their Relation to Pregnancy. LAURA H. BRANSON, Iowa City, Ia.

Axis Traction Forceps. J. P. MCMAHON, Milwaukee, Wis.

Cesarean Section: Indications and Technic: Report of seventeen cases. T. MITCHELL BURNS, Denver.

SECTION ON SURGERY

CHAIRMAN, GEORGE W. CRILE, CLEVELAND; SECRETARY, JOHN T. BOTTOMLEY, BOSTON

Brachial Palsy. CHARLES H. FRAZIER, Philadelphia.

Results of Operations on the Gasserian Ganglion for Trigeminal Neuralgia. HARVEY CUSHING, Baltimore.

The Advantages of the So-Called Decortication of the Lung for Old Empyemata. FRED B. LUND, Boston.

The Precancerous Lesions in One Thousand Skin Cancers.
JOSEPH C. BLOODGOOD, Baltimore.

Pylorectomy or Excision of the Ulcer-Bearing Area.
WILLIAM L. RODMAN, Philadelphia.

A Plea for More Direct Methods in Dealing with Gastric Ulcers. R. C. COFFEY, Portland, Oregon.

Oration on Surgery: Ascending and Hematogenous Infections of the Kidney. GEORGE E. BREWER, New York.

Treatment of Localized Appendicular Abscess.
VAN BUREN KNOTT, Sioux City, Iowa.

Subphrenic Abscess, the Result of Acute Infection of the Appendix. GEORGE G. ROSS, Philadelphia.

Diabetes, a Surgical Disease.
JOHN B. DEAVER, Philadelphia.

The End-Results of Gall-Bladder Surgery.
E. MACDOWELL STANTON, Schenectady, N. Y.

Typhoid Infection of the Biliary Tract.
CHARLES N. SMITH, Toledo, Ohio.

Factors Hostile to Success in Gall-Bladder Surgery.
B. B. DAVIS, Omaha.

The Pathology and Treatment of Tuberculosis of the Long Bones. HOWARD STILES, Edinburgh, Scotland.

The Three Main Rules in the Treatment of Adult Joint Tuberculosis. LEONARD W. ELY, Denver.

Gonorrheal Osteoperiosteitis of the Long Bones.
STEPHEN H. WATTS, Charlottesville, Va.

Direct Experimental Transplantation of Tendons and Fascia.
DEAN D. LEWIS and CARL B. DAVIS, Chicago.

Experimentally Produced Intestinal Obstruction.
FRED T. MURPHY and BETH VINCENT, Boston.

Study of Five Hundred Cases of Prostatectomy.
EDWARD S. JUDD, Rochester, Minn.

Sensibility of the Peritoneum and Abdominal Viscera.
JAMES F. MITCHELL, Washington, D. C.

Several Unusual Joint Cases, Their Treatment and the Results.
GEORGE W. GUTHRIE, Wilkes-Barre, Pa.

Spinal Fractures. A. F. JONAS, Omaha.

Thirty Years' Experience with Fractures at Minnequa Hospital. R. W. CORWIN, Pueblo, Colo.

Pinning Fragments of Bone Beneath the Fluoroscopic Screen; A Simple Procedure to Aid the Splint in Selected Cases.
ROBERT T. MORRIS, New York.

The Open Treatment of Fractures.
EDWARD MARTIN, Philadelphia.

Clinical and Experimental Work to Determine the Value of Lane's Plate in Treatment of Fractures.
WILLARD BARTLETT and M. R. HEWITT, St. Louis.

New Methods for Closing Skin Wounds.
E. WYLLYS ANDREWS, Chicago.

Lingual, Sublingual and Other Aberrant Thyroids.
CHARLES H. MAYO, Rochester, Minn.

The Theory for the Pathologic Physiology Involved in Diseases of the Thyroid and Its Therapeutic Application.
JOHN ROGERS, New York.

Factors Influencing the Safety of Surgical Treatment for Goiter. M. B. TINKER, Ithaca, N. Y.

Lymphangiomata of the Omentum and Omental Cysts.
STANLEY STILLMAN, San Francisco.

Tumors of the Mesentery. H. A. ROYSTER, Raleigh, N. C.

Rhinoplasty; a Suggestion for Preventing Contracture of the Nares After Operation.
E. DENEGRE MARTIN, New Orleans.

A New Technic for Rectopexy for Rectal Prolapse.
L. L. MCARTHUR, Chicago.

Surgery of the First Portion of the Left Subelavian Artery, with Report of a Case of Successful Ligation.
JAMES M. NEFF, Spokane, Wash.

A Plea for Larger Incision and More Thorough Examinations in Abdominal Surgery.
JAMES E. MOORE, Minneapolis.

Membranous Pericolitis.
JABEZ N. JACKSON, Kansas City, Mo.

The Surgical Treatment of Megacolon.
WALLACE I. TERRY, San Francisco.

Wooden Phlegmon of the Neck (Reclus).
CHARLES A. POWERS, Denver.

SECTION ON OPHTHALMOLOGY

CHAIRMAN, ALBERT E. BULSON, JR., FORT WAYNE, IND.; SECRETARY, EDGAR S. THOMSON, NEW YORK CITY

Chairman's Address.
ALBERT E. BULSON, JR., Fort Wayne, Ind.

Healing of Iridectomy Wounds and Its Influence on Glaucoma.
ADOLPH ALT, St. Louis.

Significance of Non-Syphilitic Retinitis, Based on a Study of the Subsequent History of 187 Cases.
F. T. ROGERS, Providence, R. I.

Treatment of Purulent Ophthalmia and Simple Means for Its Prevention in Infants.
MARK D. STEVENSON, Akron, O.

Further Report on Corneal Regeneration.
M. WIENER, St. Louis.

Immediate Removal of Traumatic Cataracts.
J. A. DONOVAN, Butte, Mont.

Medical Treatment of the Patient Before or After Cataract Extraction. D. W. GREENE, Dayton, O.

A New Operation for Extraction of Cataract in Its Capsule. VARD H. HULEN, Houston, Tex.

Intrusion of the Amnion as a Possible Cause of Congenital Cataract. OTTO LANDMAN, Toledo, O.

Intra-Ocular Neoplasms, With Report of Five Cases. F. PARK LEWIS, Buffalo, N. Y.

Another Case of Chloroma ARTHUR J. BEDELL, Albany, N. Y.

Distortion of the Visual Fields Observed in a Series of 200 Cases of Brain Tumor. HARVEY CUSHING and G. J. HEUER, Baltimore.

Subhyaloid and Vitreous Hemorrhages. HIRAM WOODS, Baltimore.

Report of the Committee on Collective Investigation Concerning the Ocular Muscles. LUCIEN HOWE, Buffalo, N. Y.; HOWARD F. HANSELL and THEODORE B. SCHNEIDEMANN, Philadelphia.

The Optometry Question and the Larger Issue Behind it. EDWARD JACKSON, Denver.

Shortening of an Ocular Muscle by Tucking. H. W. WOODRUFF, Joliet, Ill.

A New Method in Operating for Ectropion. A. EDWARD DAVIS, New York.

Fig. 6.—A group of park views, including one of the famous sunken gardens.

Report of Nine Cases of Brain Tumor. SHERMAN VOORHEES, Elmira, N. Y.

Tuberculous Interstitial Keratitis, with Special Reference to Treatment with Tuberculin. R. S. LAMB, Washington, D. C.

Use of Tuberculin in Corneal Lesions in General, and Phlyctenular Keratitis in Particular. R. J. TIVNEN, Chicago.

Tuberculous Cyclitis Occurring in a Previously Injured Eye, Simulating Intra-Ocular Tumor. OSCAR DODD and FRANCIS LANE, Chicago.

The Venous Pulse and Blanching of Retinal Vessels, Induced by Making Pressure on Eyeball, an Index to General Blood-Pressure. MELVILLE BLACK, Denver.

Fundus Lesions Associated with Alterations in the Composition of the Blood. JAMES BORDLEY, JR., Baltimore.

Plastic Surgery of the Eyelids, Using the Wolffe Graft. F. PHINIZY CALHOUN, Atlanta, Ga.

Ocular Discomfort, the Result of Near Use of the Eyes Under Modern Artificial Illumination. NELSON M. BLACK, Milwaukee, Wis.

Changes Occurring in the Refraction of Corrected Ametropic Eyes. WILLIAM ZENTMAYER, Philadelphia.

Refraction Changes in Diabetes. CASSIUS D. WESTCOTT and JOHN B. ELLIS, Chicago.

The Psychologic Aspect of Refraction. S. L. LEDBETTER, Birmingham, Ala.

Nystagmus. E. R. LEWIS, Dubuque, Ia.

The Ocular Conjugate and Fusion Brain Centers; Only Two Axes of Ocular Rotations, and Only Two Planes of Reference. G. C. SAVAGE, Nashville, Tenn.

SECTION ON LARYNGOLOGY AND OTOLOGY

CHAIRMAN, DUNBAR ROY, ATLANTA, GA.; SECRETARY, GEORGE E. SHAMBAUGH, CHICAGO

Chairman's Address. DUNBAR ROY, Atlanta, Ga.
Treatment of Tuberculosis by Sanatorium Method in the Southwest. E. S. BULLOCK, Silver City, N. M.
Histologic Examination of the Faucial Tonsils With Reference to Tuberculosis. E. C. SEWALL, San Francisco.
Laryngeal Growths. J. McCOY, New York.
A Nasal Rubber Tampon. MARK D. STEVENSON, Akron, O.

Symposium on Diseases of the Frontal Sinus

Pathologic Conditions Involving the Frontal Sinus. B. R. SHURLY, Detroit.
Conditions in the Frontal Sinus Which Require an External Operation. C. M. COBB, Boston.
Indications for Intranasal Operations for the Relief of Frontal Sinus Disease. HARMON SMITH, New York.
Report of Twenty-Eight Killian Operations. HENRY HORN, San Francisco.
Recognition of Serous Labyrinthitis. J. R. FLETCHER, Chicago.
Report of a Case of Primary Infection of the Sigmoid Sinus and Jugular Vein. SHERMAN VOORHEES, Elmira, N. Y.

Symposium on Relations of Nasal Accessory Sinuses and Diseases of the Eye

Anatomic Conditions which Have Practical Bearing on Relations Between Diseases of Nasal Accessory Sinuses and Diseases of Eye. W. E. SAUER, St. Louis.
Eye Complications Arising from Diseases of the Nasal Accessory Sinuses. A. H. ANDREWS, Chicago.
Operative Treatment of Suppurative Sinus Disease Producing Orbital Complications. J. H. BRYAN, Washington, D. C.
Improved Technic for Skin Grafting in the Radical Mastoid Operation. C. F. WELTY, San Francisco.
Diagnosis of Retrolabyrinthine Affections. H. B. GRAHAM, San Francisco.

Fig. 7.—View of Glenwood Mission Inn, Riverside, with pleasure parties just about to drive away.

Symposium on Relations Between Middle-Ear Diseases and Conditions in the Nose and Throat

Influence of Climate on Middle-Ear Diseases. J. J. PATTEE, Pueblo, Colo.
How Far May Conditions in the Nose and Throat be Responsible for Middle-Ear Diseases? W. R. MURRAY, Minneapolis.
What Improvement Can Rationally be Expected from Treatment Applied to the Nose and Throat in Cases of Middle-Ear Deafness? J. F. BARNHILL, Indianapolis.

SECTION ON NERVOUS AND MENTAL DISEASES

CHAIRMAN, W. A. JONES, MINNEAPOLIS; SECRETARY, E. E. SOUTHARD, CAMBRIDGE, MASS.

Chairman's Address: The Sensory Pathway. **W. A. JONES, Minneapolis.**
Arthritic Muscular Atrophy, Clinical and Experimental. CHARLES LEWIS ALLEN, Los Angeles.
A Year's Experience with Salvarsan in Treatment of Chronic Nervous Diseases Consecutive to Syphilis. JOSEPH COLLINS, New York.
Nervous and Mental Diseases Following Castration in Women: A Statistical Study of 237 Cases. ALFRED GORDON, Philadelphia.
Recognition of the Preneurasthenic and Pre-Insane Condition in the Young, with Reference to Prevention: A Study for the General Practitioner. ROSS MOORE, Los Angeles.
Auto-Intoxication as a Cause of Mental Disease. L. VERNON BRIGGS, Boston.
A Hitherto Undescribed Symptom in Paralysis Agitans: The Cog-Wheel Movement of the Extremities. HAROLD N. MOYER, Chicago.
Cerebellopontine Tumors, Their Treatment and Possible Complications in Their Diagnosis. A. T. BRISTOW, Brooklyn, N. Y.
The Training Camp Idea in Treatment of Neurasthenic and Allied Functional Diseases. T. J. ORBISON, Pasadena.
Surgery of the Nervous System. HARVEY CUSHING, Baltimore.
Parietal Lobe Lesions in Cortical Disease. E. E. SOUTHARD, Cambridge, Mass.
The Peripheral Nerves in Experimental Poliomyelitis. E. W. MOOERS, Boston.
Voracity in Mental Diseases. J. RALPH JACOBY and EDWARD LIVINGSTON HUNT, New York.
Traumatic Nervous Diseases, with Special Considerations of the Prognosis. T. DILLER, Pittsburg, Pa.
The Study of Tumors of the Acoustic Nerve. J. RAMSAY HUNT, New York.
Tuberculous Meningitis: A Pathologic Study. JOHN H. W. RHEIN, Philadelphia.
Differential Points in Tabes Dorsalis and General Paresis. EDWARD FISHER, New York.
Chorea: A Study. H. A. COTTON, Trenton, N. J.
The Relationship of Drug Addicton to Neurology and Psychiatry. C. C. WHOLEY, Pittsburg, Pa.
State Cure of Drug and Alcoholic Habitués. DANIEL CROSBY, Oakland, Cal.
Distinct Neuropsychoses Common to All Cases of Inebriety and Alcoholism. T. D. CROTHERS, New Haven, Conn.
Recent Advances in Treatment of Narcotic Drug Addictions. C. L. CASE, Oakland, Cal.
Chronic Alcoholism: What Can and What Cannot be Accomplished by Treatment. GEORGE E. PETTEY, Memphis, Tenn.
Importance of Determining the Cause of Inebriety. BENJAMIN T. BURLEY, Worcester, Mass.
Neuropathologic Studies. G. Y. RUSK, Berkeley, Cal.
Defects of the Mouth and Throat and Their Relations to Cerebral Disorders. GEORGE V. I. BROWN, Milwaukee, Wis.
Experimental Poliomyelitis. DRS. LUCAS and OSGOOD, Boston.
Spinal Pachymeningitis. JAMES J. PUTNAM, Boston.
Tabetiform Degenerations in a Case of Compression of the Spinal Cord by Aortic Aneurysm. J. B. AYER, Boston.
The Diagnosis and Prognosis of the Unfit. LOUISE PATTERSON, Vineland, N. J.

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

CHAIRMAN, W. A. EVANS, CHICAGO; SECRETARY, C. HAMPSON JONES, BALTIMORE

Ventilation of Cars. T. R. CROWDER, J. A. DENNY and C. A. SCHROYER, Chicago.
Prevention of Ophthalmia Neonatorum. F. PARK LEWIS, Buffalo, N. Y.
Control of Venereal Disease by a Municipality. GUY L. KIEFER, Detroit, Mich., and GEORGE M. KOBER, Washington, D. C.
Public Education. J. N. HURTY, Indianapolis; W. F. SNOW, Stanford University, California, and OSCAR DOWLING, Shreveport, La.
Typhoid Fever. L. L. LUMSDEN, Washington, D. C.; W. C. RUCKER, P. H. & M.-H. S., and A. W. FREEMAN, Richmond, Va.
Small-Pox. H. M. BRACKEN, St. Paul, Minn.

Control of Tuberculosis, Laws, etc., for Resort Communities. G. W. HOLDEN, Montclair, Colo.; W. J. BARLOW, Los Angeles, Cal., and W. H. ANDERSON, El Paso, Texas.
Laws for Small Communities. B. F. ROYER, Harrisburg, Pa.
Disinfectants. W. E. POST and E. K. NICOLL, Chicago.
Controlling Hydrophobia in the Human Subject. A. M. STIMSON, Washington, D. C.
Methods for Controlling Diphtheria. C. HAMPSON JONES, Baltimore; M. L. PRICE, Baltimore, and W. C. WOODWARD, Washington, D. C.
Control of Bovine Tuberculosis in Relation to Milk Supply. M. P. RAVENEL, Madison, Wis.
Pasteurization. P. G. HEINEMANN and E. O. JORDAN, Chicago.
Plague Control Methods. RUPERT BLUE, San Francisco.

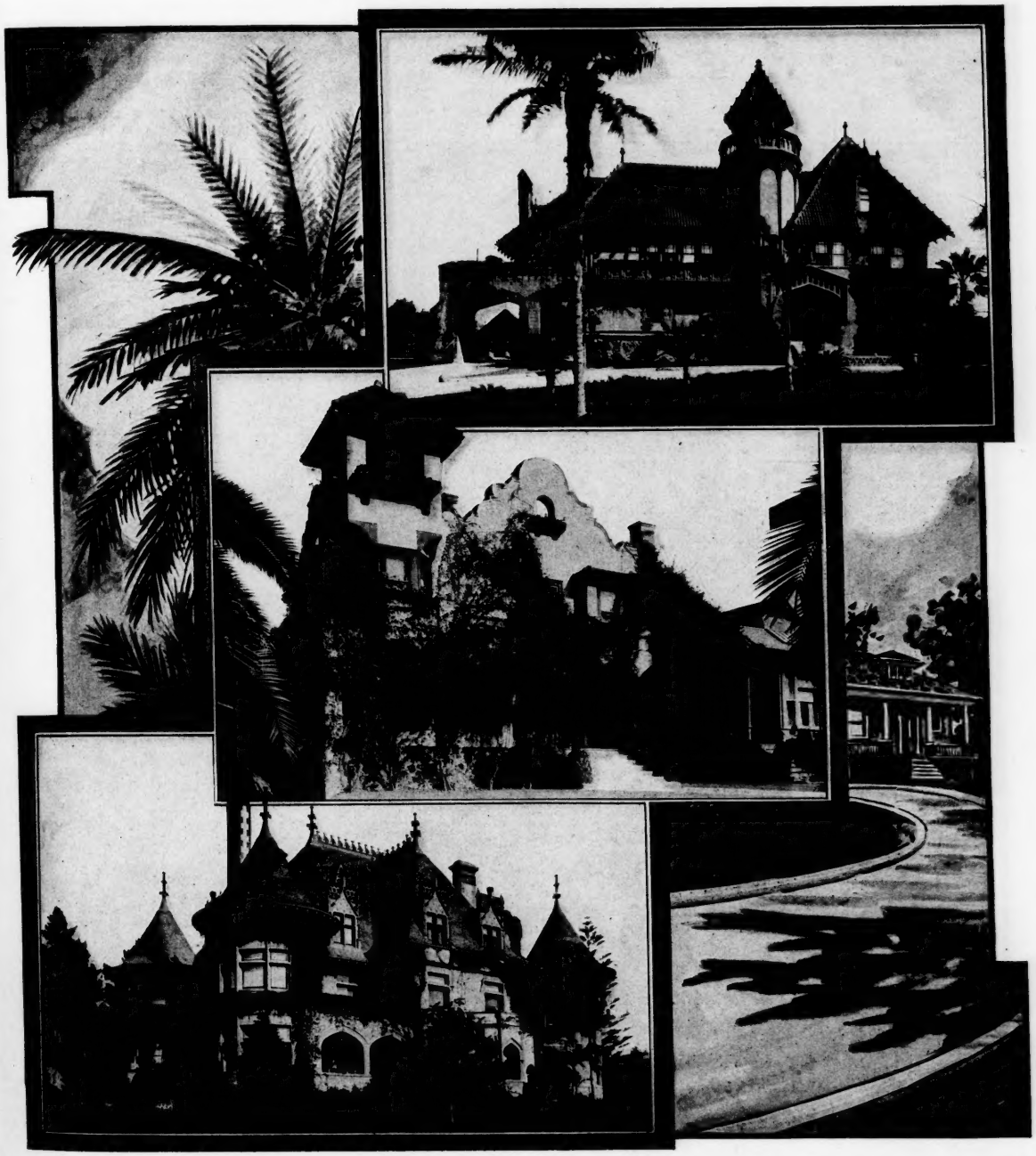


Fig. 8.—A group of residences. Note the characteristic California foliage.

Controlling Privy Vaults and Night Soil in a City. CLYDE E. FORD, Cleveland, and R. G. BRODERICK, San Francisco.
Educating a City in Public Health. RAYMOND RUSS, San Francisco; D. L. EDSALL, Philadelphia, and E. R. PRITCHARD, Chicago.
Houses for Working Men. C. C. BROWNING, Monrovia, Cal., G. H. KRESS, Los Angeles, Cal., and C. B. BALL, Chicago.
Purification of Sewage. RUDOLPH HERING, New York, and ARTHUR LEDERER, Chicago.
Methods of Controlling a Milk Supply in Cities with a Railroad Haul. E. J. LEDERLE, New York.
Prompt Marketing of Milk. L. S. MACE, San Francisco.
Physical Examination of School Children. GEORGE L. LESLIE, E. C. BEACH, Los Angeles, and E. B. HOAG, Pasadena, Cal.

XUM

Control of Oysters.
H. W. WILEY and CHARLES WARDELL STILES, Washington, D. C.

Methods for Control of Tuberculosis in a Resort State.
W. S. GODFREY and T. Y. HULL, San Antonio, Texas.

Pellagra. C. F. WILLIAMS, Columbia, S. C.; W. S. RANKIN, Raleigh, N. C., and H. F. HARRIS, Atlanta, Ga.

Legal Principles of Police Power.
W. A. EVANS, Chicago; H. B. HEMENWAY, Evanston, Ill., and HON. HARRY OLSON, Chicago.

Efficiency Methods in Public Health Work. G. KOEHLER, Chicago.

Control of Contagion Through Doctors and Nurses.
HEMAN SPALDING, J. D. RAWLINGS and H. COHEN, Chicago.

Fig. 9.—Street views. The picture above is at Fourth and Main Streets, looking west. Farmers and Merchants Bank on left. Hotel Westminster and Hotel Van Nuys on right; also H. W. Hellman Building. The tall building in the rear of the banks is the Union Trust Building, the last two being on the corner of Fourth and Spring Streets; the view below is a bit of Broadway, one of the main shopping streets of the city.

Infantile Paralysis.
Methods for Control. W. H. FROST.
P. H. & M.-H. S., S. G. DIXON, Harrisburg, Pa.

Public Exhibits for Permamanent Installation.
FRANK B. WYNN, Indianapolis.

The Cause of Arteriosclerosis and Its Prevention. LOUIS F. BISHOP, Buffalo, N. Y.

Woman's Place in the Public Health Movement. ROSALIE SLAUGHTER MORTON, New York.

The Reportability of Syphilis and Gonorrhœa. FRANCES M. GREENE, Cambridge, Mass.

Control of Drinking-Water.
W. F. DUTTON, Carnegie, Pa., and G. E. FELL, Buffalo, N. Y.

Blood-Pressure and Its Bearing on Public Health Problems.
HARLEY E. MCDONALD, Los Angeles

Advisability of Government Medical Control of the Hygienic Factors of the Waters of the Great Lakes.
G. E. FELL, Buffalo, N. Y.

The Methods of Making Throat Cultures.
F. O. TONNEY, Chicago.

SECTION ON STOMATOLOGY

CHAIRMAN, STEWART L. MCCURDY, PITTSBURG, PA.; SECRETARY, EUGENE S. TALBOT, CHICAGO.

Oral Development in the Progeny Influenced by the Buccal Tissues During Pregnancy. ARTHUR ZENTLER, New York.

Importance of the Deciduous Teeth in the Development of the Child. M. EVANGELINE JORDON, Los Angeles, Cal.

Alteration in Nostril from Birth to Puberty: Relation to Operations on Lip and Nose. T. E. CARMODY, Denver.

Speech Defects Due to Imperfect Development Without Cleft Palate. GEORGE V. I. BROWN, Milwaukee, Wis.

Acute Mercurial Poisoning Followed by General Necrosis of Maxillæ and Otitis.
ADOLPH B. BAER, San Francisco.

Some Bacterial and Non-Bacterial Diseases. E. S TALBOT, Chicago.

Dental Subjects Touching Medical Fields.
EUGENE R. WARNER, Denver.

The Stomatologic School in the United States.
HILAIRE ALLAEYS, Antwerp, Belgium.

(a) Report of the Committee on the Advancement of Stomatologic Education. (b) Report from the Committee on the Advancement of Stomatologic Education from the American Medical Association to The Carnegie Foundation for the Advancement of Teaching.
EUGENE S. TALBOT, Chicago; HERBERT A. POTTS, Chicago; FREDERICK B. MOOREHEAD, Chicago.

Intimate Relation Between Condition of Oral Cavity and General Health. C. DEICHMILLER, Los Angeles.

Osteomyelitis of Maxilla. A. B. BAER, San Francisco.

SECTION ON DISEASES OF CHILDREN

CHAIRMAN, S. M. HAMILL, PHILADELPHIA; SECRETARY, L. T. ROYSTER, NORFOLK, VA.

Chairman's Address: The Opportunities of the Pediatrist in Relation to Public Health.
S. M. HAMILL, Philadelphia.

Report on Brain Cases in Children.
WILLIAM J. BUTLER, Chicago.

A Study of Children in Reference to Enteroptosis.
RICHARD R. SMITH, Grand Rapids, Mich.

Institutional Care of Young Infants.
THOMAS S. SOUTHWORTH, New York.

Influence of Summer Heat on Production of Gastro-Intestinal Diseases of Infants. I. A. ABT, Chicago.

A Statistical Investigation on the Influence of Various Methods of Infant Feeding on the Morbidity and Mortality of Infants, Occurring in New Orleans from August 1, 1909, to July 31, 1910.
W. W. BUTTERWORTH, New Orleans.

Recent Experiences in Artificial Feeding of One Hundred Infants During the First Three Months of Life.
F. C. NEFF, Kansas City, Mo.

Relationship of Gastric to Pancreatic Fat Digestion in Infants.
J. P. SEDGWICK and F. W. SCHULTZ, Minneapolis.

The Neurotic Basis of Juvenile Delinquency, Based On Some Special Cases of the San Francisco Juvenile Court.
PHILIP KING BROWN, San Francisco.

Obstructions at the Pylorus Occurring in Infants.
LANGLEY PORTER, San Francisco.

Etiology and Treatment of Acute Nephritis in Children, With Report of Fourteen Cases.
H. M. MCCLANAHAN, Omaha, Neb.

Relation of Meat Ingestion to Indicanuria in Childhood.
E. C. FLEISCHNER, San Francisco.

Rachitis in Its Early Stages.
J. W. COKENOWER, Des Moines, Ia.

Leukemia in Childhood. W. F. CHENEY, San Francisco.

Tuberculosis of the Bronchial Glands; Symptomatology, Physical Signs and *X*-Ray Appearance.
HENRY FARNUM STOLL, Hartford, Conn.

Joint Session with Section on Medicine

Epidemiologic and Etiologic Studies of Acute Poliomyelitis in Pennsylvania. SAMUEL G. DIXON, Harrisburg, Pa.

Recent History and Etiology of Infantile Paralysis.
ROBERT W. LOVETT and MARK W. RICHARDSON, Boston.

Pathology, Symptomatology, Diagnosis, Prognosis, Prophylaxis and Treatment of Infantile Paralysis.
ROBERT W. LOVETT and MARK W. RICHARDSON, Boston.

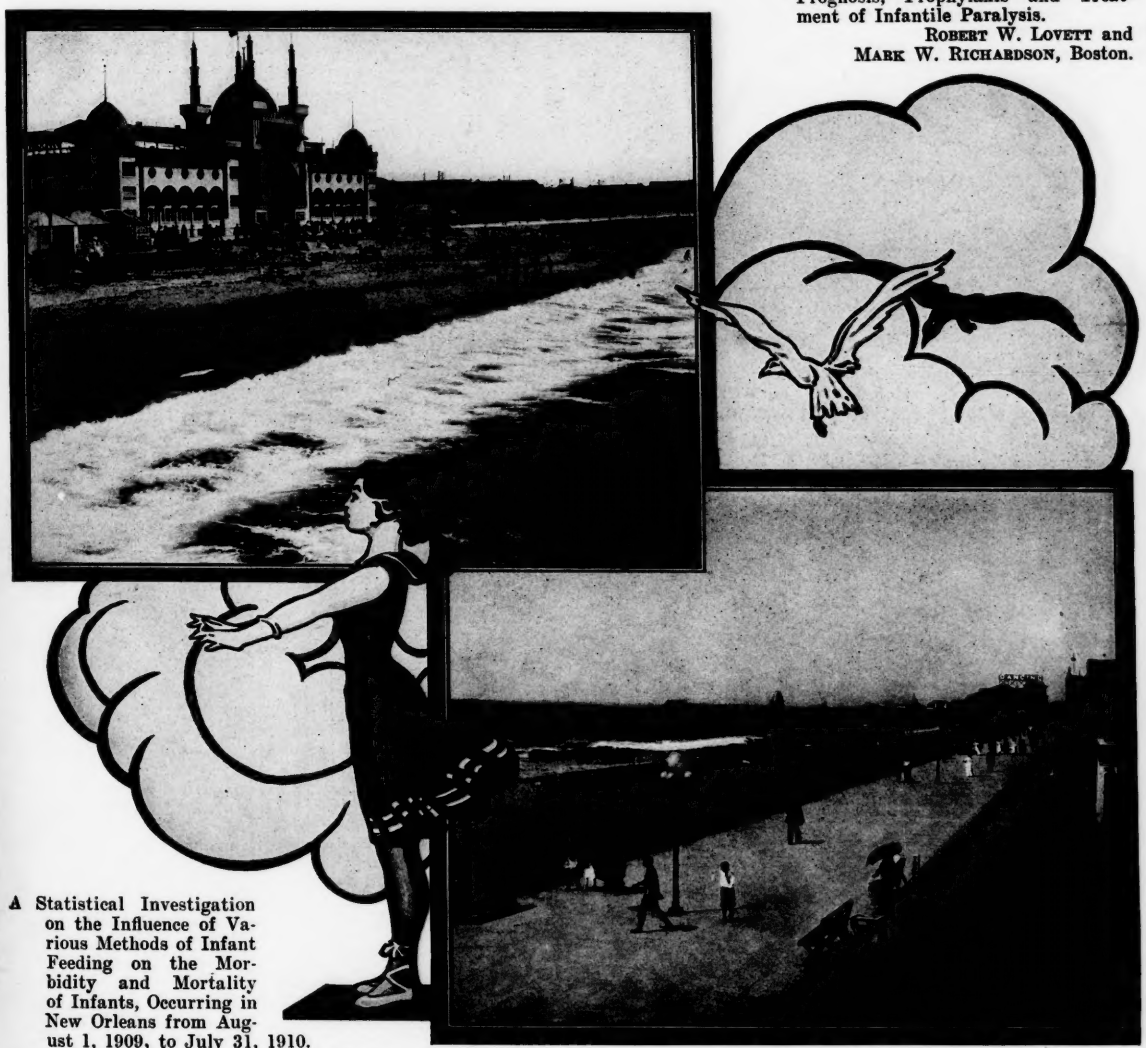


Fig. 10.—Two views of the beach at Ocean Park. Does it remind you of Atlantic City?

Infantile Paralysis as Observed in Massachusetts, 1907-10.
ROBERT W. LOVETT and MARK W. RICHARDSON, Boston.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

CHAIRMAN, LAWRENCE LITCHFIELD, PITTSBURG, PA.; SECRETARY, M. I. WILBERT, WASHINGTON, D. C.

Chairman's Address. LAWRENCE LITCHFIELD, Pittsburg.

Address of Chairman of Delegation from American Pharmaceutical Association. ALBERT SCHNEIDER, San Francisco.

Report of the Committee on the United States Pharmacopeia, by the Chairman. REID HUNT, Washington, D. C.

Dangers of Certain Ethical Proprietary Preparations to Both Physicians and Public. M. H. FUSSELL, Philadelphia.
Present Status of Treatment of Hyperthyroidism by an Antithyroid Serum. SILAS P. BEEBE, New York.
Pharmacology of Caffein. WILLIAM SALANT, Washington, D. C.
Pressor Principle of Our Eastern Mistletoe. A. C. CRAWFORD, Stanford Univ., Cal.
Treatment of Chronic Hypertension. L. G. VISSCHER, Los Angeles.
Purin Content of Common Articles of Food. H. D. ARNOLD and RALPH C. LARRABEE, Boston.
Uric Acid and Purin Metabolism. A. C. REED and GEO. B. WALLACE, New York.

Fig. 11.—View of Redlands and the orange groves, with the mountains in the background.

Experiments on Relation of Thyroid to Diet. REID HUNT, Washington, D. C.

Symposium on Uncinariasis

Treatment of Hookworm Disease in the Individual and in the Community. CHARLES W. STILES, Washington, D. C.
Relative Efficiency, as Compared with Thymol, of Certain Proposed Remedies for Hookworm Disease. W. H. SCHULTZ, Washington, D. C.
Hookworm Infection in the Deep Gold Mines of California. E. E. ENDICOTT. Jackson, Cal.

Fig. 12.—The famous eucalyptus drive.

Hookworm Disease. HERBERT GUNN, San Francisco.
Prevention of Hookworm Disease in California. WILLIAM F. SNOW, Sacramento, Cal.
Therapeutics of Ulcer of the Stomach. J. R. ARNEILL, Denver.
Relative Value of Physical and Functional Signs in the Management of Failing Circulation. EMILE SCHMOLL, San Francisco.
Relation of Cardiac Irregularities to Treatment. A. W. HEWLETT, Ann Arbor, Mich.
Factors in Treatment of Myocardial Lesions. W. W. KERR, San Francisco.
Choice of Diuretics in Cardiac Edema. EGBERT LEFEVRE, New York.

Fig. 13.—Picking oranges—a pleasure to anticipate.

Effect of the Digestive Secretions on the Activity of Digitalis and Allied Drugs. WORTH HALE, Washington, D. C.
Relations of the Nervous Mechanism of the Heart to Drug Effects as Indicated by Experiments on the Terrapin. RAY LYMAN WILBUR, San Francisco.
Use of the Different Salicylates in Rheumatism. ALEXANDER LAMBERT, New York.
Use of Salvarsan. J. O. HIRSCHFELDER, San Francisco.
Further Experience with Salvarsan at the New York Skin and Cancer Hospital. HOWARD FOX and WILLIAM B. TRIMBLE, New York.

Fig. 14.—A residence at Redlands.

Treatment of Hemoptysis in Pulmonary Tuberculosis. MAX ROTHSCHILD, San Francisco.
Climate in Treatment of Pulmonary Tuberculosis. W. JARVIS BARLOW, Los Angeles.
Management of Endopericarditis as a Complication of Acute Tuberculosis. FRANK A. JONES, Memphis.
Dietetic Studies in Sanatoria for the Tuberculous in Colorado. C. D. SPIVAK, Denver.
Hypodermic Use of Citrate of Iron in Secondary Anemias. E. S. BULLOCK and LEROY S. PETERS, Silver City, N.M.

Specific Tissue Inoculation of Vaccine.
GERALD B. WEBB and G. BURTON GILBERT, Colorado Springs, Colo.

Studies on the Treatment of Pneumonia, Typhoid Fever and Other Infections with Bacterial Vaccines.
AUGUSTUS F. SCHAFER, Bakersfield, Cal.

Report on One Hundred and Thirty Cases of Psoriasis in Private Practice on a Strictly Vegetarian Diet.
L. DUNCAN BULKLEY, New York.

The Rôle of Pharmacology and of Empiricism in the Management of Postoperative Cases.
S. T. POPE, Watsonville, Cal.

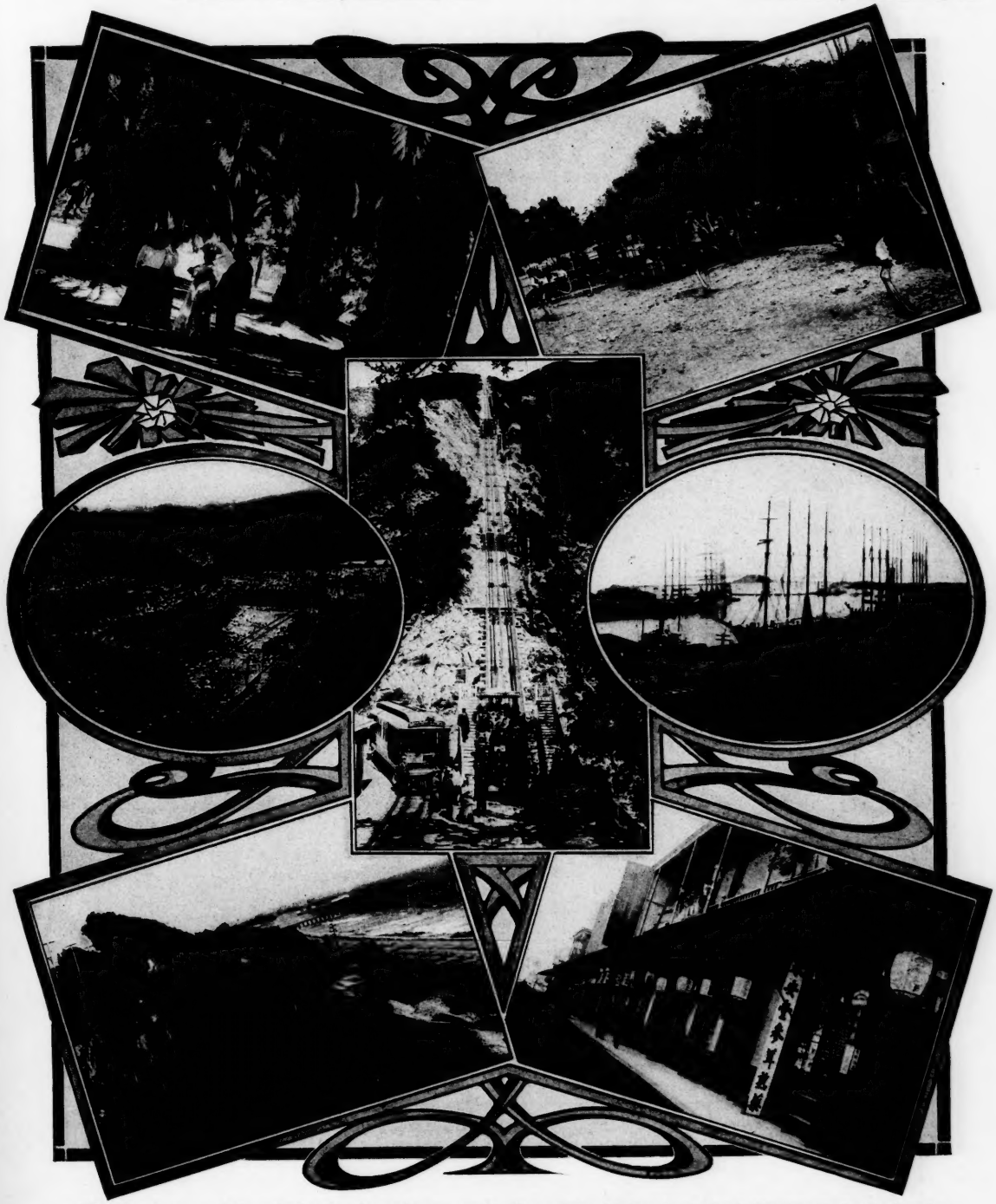


Fig. 15.—A group of views in Los Angeles and some surrounding points of interest: A view in Eastlake Park; the Cawston ostrich farm; pigeon farm in Los Angeles, 100,000 birds; the cable incline on Mount Lowe; view of the harbor and shipping at San Pedro; the cliffs at Santa Monica; street in Chinatown, Los Angeles.

Difficulties Encountered in the Therapeutic Use of Tuberculin.
F. M. POTTENGER, Monrovia, Cal.

Production of Immunity in Tuberculosis by Intravenous Injections of Tuberculin. CHARLES A. SHEPARD, Needles, Cal.

How Our Therapeutics May Be Improved.
BOARDMAN REED, Alhambra, Cal.

The Principles of Hydrotherapy in the Treatment of Diseases.
GEORGE K. ABBOTT, Loma Linda, Cal.

XUM

SECTION ON PATHOLOGY AND PHYSIOLOGY

Chairman, YANDELL HENDERSON, New Haven, Conn.; Secretary, LEO LOEB, St. Louis.

Chairman's Address: Clinical Physiology, an Opportunity and a Duty. YANDELL HENDERSON, New Haven, Conn.

Streptothrix and Streptothricosis. E. J. CLAYPOLE, Los Angeles.

Relation of Specific Precipitation to the Reaction of Fixation. FREDERICK R. GAY, Berkeley, Cal.

Specificity. H. GIDEON WELLS, Chicago.

Heart-Block. J. G. VAN ZWALUWENBURG. Ann Arbor. Mich.

Pathology of Joint Tuberculosis, with Lantern Slide Demonstration. LEONARD W. ELY, Denver.

Immunity in Tuberculosis. Its Production in Monkeys and Children.
GERALD B. WEBB and WM. WHITRIDGE WILLIAMS, assisted by ALEXIUS M. FORSTER and G. BURTON GILBERT, Colorado Springs, Colo.

Hypertrophy and Cancer of the Prostate.
LOUIS B. WILSON and B. F. MCGRATH, Rochester Minn.

Antiformin. FRANK SMITHIES, Ann Arbor, Mich.

Fig. 16.—A group of headquarters hotels; in the center is the Alexandria, the general headquarters; above to the left is the Lankershim (Practice of Medicine); to the right, the Angelus (Otology and Laryngology); at the left below, the Van Nuys (Ophthalmology), and to the right, the Westminster (Diseases of Children).

Some Factors that Determine the Virulency of the Bacillus Coli Communis. FENTON B. TURCK, Chicago.

A Laboratory Study of the Metabolic Products of Certain Pathogenic Bacteria. E. MARK HOUGHTON, Detroit.

Bacteriology of the Ear. JESSIE B. HUDSON, Iowa City, Ia.

Photogenic Bacteria. HALDEN JONES, Los Angeles.

Reactions Induced by Antityphoid Vaccine.
HENRY ALBERT and A. M. MENDENHALL, Iowa City Ia.

Splenic Anemias. J. F. HULTGEN, Chicago.

A Case of Diffuse Cerebral Sclerosis Occurring in Infancy.
GLANVILLE Y. RUSK, Berkeley, Cal.

A Study of Experimental Bland Infarction.
HOWARD T. KARSNER and J. H. AUSTIN, Philadelphia.

Some Urinary Findings in Eclampsia.
L. B. STOCKEY, Los Angeles.

Influence of the Thyroid Gland on the Healing of Fractures.
R. L. THOMPSON, St. Louis.

Subacute and Chronic Nephritis as Found in 100 Unselected Post-Mortem Examinations.
W. OPHÜLS, San Francisco.

Verruca Peruana.
SAMUEL T. DARLING, Ancon Hospital, Canal Zone.

The Pathogenesis of Balantidium Coli.
FRED B. BOWMAN, Manila. Presented by W. E. MUSGRAVE, Manila, P. I.

The Pathogenesis of Interstitial Myocarditis and Hypertrophy of the Heart.
LEO LOEB and MOYER S. FLEISCHER, St. Louis.

The Action of Drugs in Pathologic Conditions.
WILLIAM SALANT, Washington, D. C.

Bone Hyperplasia and Tumor of Bone.
E. R. LECOUNT, Chicago.

The White Cells in Tuberculosis.
W. WARNE WATKINS, Phoenix, Ariz.

The Use of Rebreathing in Administration of Anesthetics and as a Therapeutic Measure.
W. D. GATCH, Baltimore.

Wednesday night a reception in honor of the President will be given at the Shrine Auditorium. This is the most formal social function of the meeting.

Thursday night a smoker and vaudeville entertainment will be given at the Hamburger Roof Garden, Eighth and Broadway, to which everybody is invited.

Friday night there will be a midsummer night carnival at Venice and Ocean Park beaches. These beaches are reached by electric trains from the central station on Hill Street, between Fourth and Fifth.

The afternoon programs for the benefit of the ladies will include a reception and tea at the Hotel Alexandria Tuesday afternoon; an automobile trip about Los Angeles Wednesday forenoon; a garden party on the grounds of Dr. and Mrs. W. Jarvis Barlow in Los Angeles Wednesday afternoon, and Thursday afternoon an Al Fresco Musicale on the grounds of the residence of Dr. and Mrs. Norman Bridge in Los Angeles.

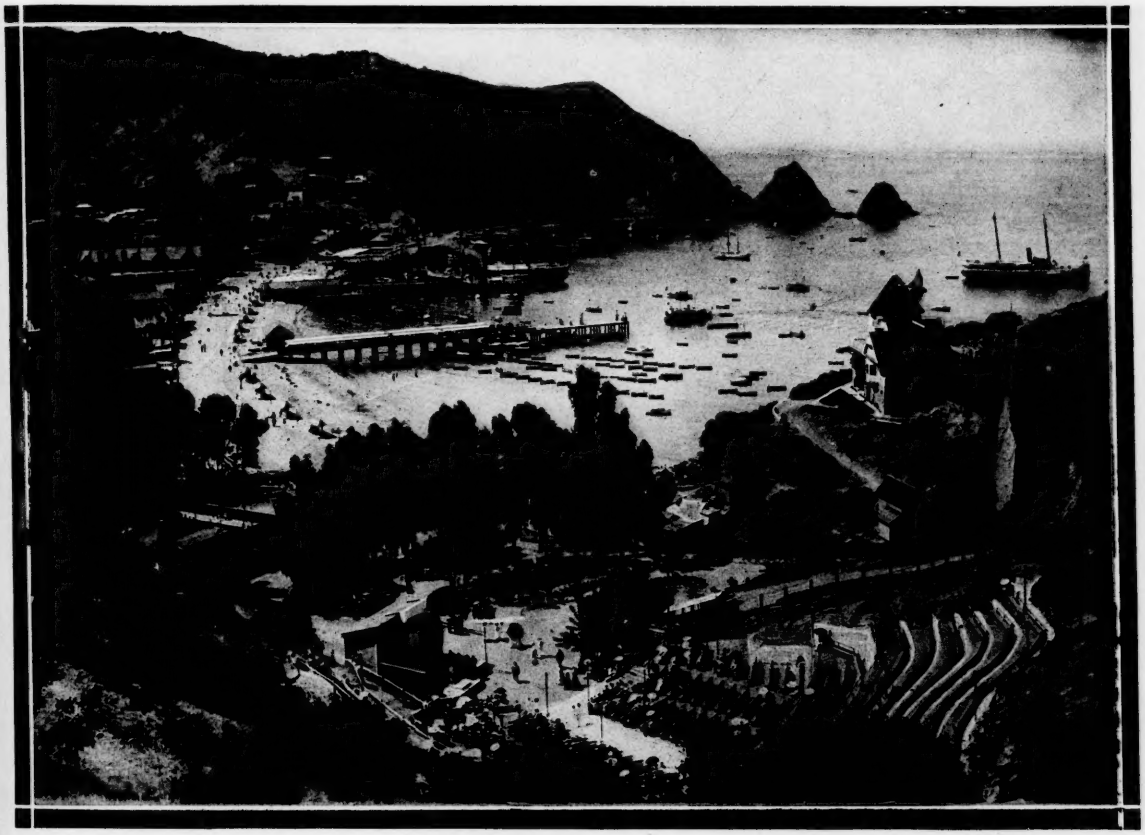


Fig. 17.—View of Avalon and the bay on Catalina Island, twenty miles from the coast of San Pedro harbor. A pleasure trip has been arranged for the members and their friends to Catalina Island. Points of interest on the island are: Sugarloaf Island; Hotel Metropole; glass-bottom boats for observing marine life on the bottom of the bay; Greek theater for band concerts; wireless station.

ENTERTAINMENTS

Social Functions and Amusements Abundantly Provided for the Los Angeles Meeting

An elaborate series of entertainments and amusements has been provided for the members and the visiting ladies during the meeting. The evening entertainments will be as follows:

On Monday night there will be banquets and smokers of several of the auxiliary societies which meet a day ahead of the American Medical Association.

Tuesday night will occur the banquets, smokers and vaudevilles of the sections and the various college classes, etc. The places and times of holding these entertainments, and further details, will be announced later, or on arrival at the meeting.

On Friday a Spanish luncheon and flower fête will be given at noon in the Sunken Gardens in Pasadena. These gardens comprise eighty acres and are acknowledged to be the most beautiful in America. Views of the gardens will be found in this issue. Following the luncheon, there will be Roman chariot races and a wild west tournament at Rose Tournament Park in Pasadena. This will be a unique entertainment. Automobiles will be provided to carry the visitors to the Sunken Gardens and to the park.

On Saturday, and on Friday also, there will be trips to Catalina, the magic island of the Pacific, with side trips in the glass bottom boats to the famous deep sea gardens. A typical Spanish barbecue will be given to the guests on both days. Another point of interest on the island is the Seal

XUM

Rocks. The fishing, which is famous at Catalina, will also attract many.

On Saturday also, there will be trolley trips to Long Beach, with luncheon at the Hotel Virginia, and a trip to Los Angeles harbor at San Pedro, with a cruise on the boats of the South Coast Yacht Club.

Other trips to surrounding resorts and cities may be made on Saturday and Sunday, or at any time during the week.

Southern California is a holiday country and there is no end of entertaining trips that may be taken through the orange groves, to the mountains or to the San Gabriel valley and the old San Gabriel Mission.

COMMITTEE ON BUREAU OF INFORMATION

Chairman, Dr. J. Y. Oldham, 214 Grant Building.

COMMITTEE ON RECEPTION AT RAILROAD STATION

Chairman, Dr. Earl Sweet, 823 Story Building.

COMMITTEE ON HOTELS AND HEADQUARTERS

Chairman, Dr. W. LeMoyne Wills, 540 Wilcox Building.

COMMITTEE ON HALLS

Chairman, Dr. John T. Ferbert, 222 Bradbury Building.

COMMITTEE ON SECTION MEETING PLACES

Chairman, Dr. Albert Soiland, 916 Wright & Callender Building.

Fig. 18.—California scenes: Venice, one of the popular coast resorts; Hotel Potter at Santa Barbara; rustic bridge in Echo Park, Los Angeles; a day's catch of fish at Catallina; view of the government breakwater at San Pedro, nearly 10,000 feet in length; cost nearly $3,000,000.

COMMITTEE ON ARRANGEMENTS

The central office of the Los Angeles Committee on Arrangements is at 240 Bradbury Building, Third and Broadway, and is in charge of Dr. H. Bert. Ellis, Chairman, and Dr. George H. Kress, Secretary.

CENTRAL EXECUTIVE COMMITTEE

General Chairman, Dr. H. Bert. Ellis, 245 Bradbury Building; General Secretary, Dr. George H. Kress, 240 Bradbury Building; Treasurer, Dr. Walter Lindley; Dr. Fitch C. E. Mattison, Pasadena; Dr. W. Jarvis Barlow.

FINANCE COMMITTEE

Chairman, Dr. F. C. E. Mattison, Chamber of Commerce Building, Pasadena.

Vice-Chairman, Clarence W. Pierce.

Section on Practice of Medicine, Dr. Dudley Fulton.

Section on Surgery, Dr. E. R. Smith.

Section on Obstetrics and Diseases of Women, Dr. M. L. Moore and Carl Kurtz.

Section on Ophthalmology, Dr. T. J. McCoy.

Section on Laryngology and Otology, Dr. Hill Hastings.

Section on Nervous and Mental Diseases, Dr. H. G. Brainerd.

Section on Preventive Medicine and Public Health, Dr. L. M. Powers.

Section on Diseases of Children, Dr. Clarence Moore.

Section on Pharmacology and Therapeutics, Dr. Theodore G. Davis.

Section on Dermatology, Dr. Ralph Williams.
Section on Pathology and Physiology, Dr. John C. Colliver.
Section on Stomatology, Dr. J. Franklin Cook.

COMMITTEE ON POST-OFFICE, TELEPHONES, ETC.

Chairman, Dr. C. B. Nichols, 721 Grant Building.

COMMITTEE ON REGISTRATION

Chairman, Dr. W. W. Beckett, 213 Exchange Building.

COMMITTEE ON COMMERCIAL EXHIBIT

Chairman, Dr. W. H. Kiger, 306 Conservative Realty Building.

COMMITTEE ON PRINTING

Chairman, Dr. J. H. Seymour, 311 Grant Building.

COMMITTEE ON PROGRAM

Chairman, Dr. O. O. Witherbee, 606 Auditorium Building.

COMMITTEE ON BADGES

Chairman, Dr. F. M. Pottenger, 1202 Union Trust Building.

COMMITTEE ON NON-AFFILIATED ASSOCIATIONS

Chairman, Dr. Granville MacGowan, 602 Lissner Building.

COMMITTEE ON SMOKER ENTERTAINMENT

Chairman, Dr. Chas. W. Bryson, 402 Delta Building.

COMMITTEE ON SECTION ENTERTAINMENTS

Chairman, Dr. Andrew Stewart Lobingier, 609 H. W. Hellman Building.

COMMITTEE ON PRESIDENT'S RECEPTION

Chairman, Dr. W. Jarvis Barlow, 616 Security Building.

COMMITTEE ON PRESS AND PUBLICITY

Chairman, Dr. George H. Kress, 240 Bradbury Building.

ASSISTANT EDITOR OF THE BULLETIN

Dr. Donald J. Frick, 815 Wright & Callender Building.

COMMITTEE ON SCIENTIFIC EXHIBIT

Local Representative, Dr. Stanley P. Black, 424 Auditorium Building.

COMMITTEE ON ENTERTAINMENT OF LADIES

Mrs. Walter Lindley, 2007 South Figueroa Street.

REGISTRATION

Importance of Registering Early

The Registration Headquarters will be found in connection with the Scientific Exhibit, the Postoffice and Commercial Exhibit on the fourth floor of the Hamburger Building, at the corner of Eighth Street and Broadway, easily accessible from hotels and meeting places, or by the car lines from the depots by those who wish to go there directly.

It will be necessary to register in order to obtain the official badge and program. No one will be admitted to any entertainment without a badge. Members are urged to register as soon as they can name their hotels.

The Registration Department will be open from 8:30 a. m. to 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, June 26, 27, 28 and 29, and from 9 to 10 a. m. on Friday, June 30.

Attention is called to the following directions:

1. Each physician desiring to register will first fill out a registration card. One should write very plainly, or print, as the cards are given to the printer to use as "copy" for putting the names in the daily *Bulletin*.

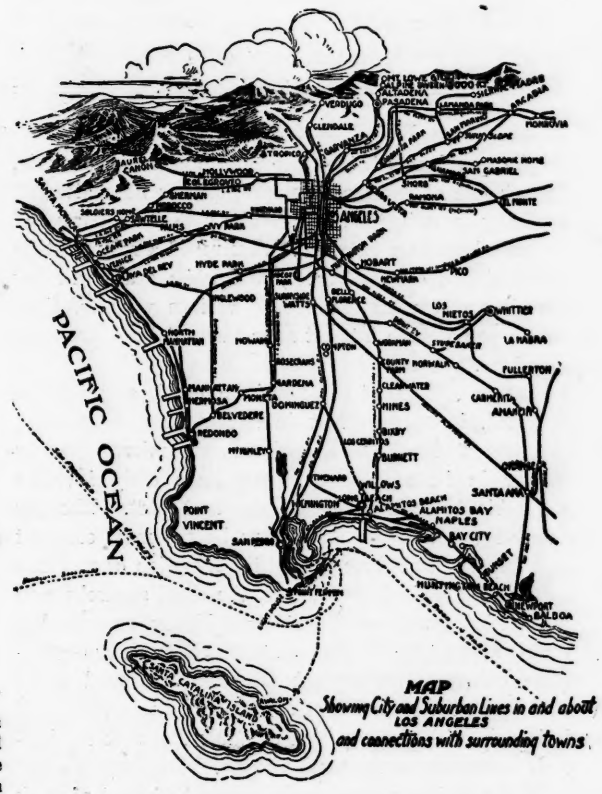
2. *Each member who has paid his annual dues* in full will present his pocket card (which was sent him from the Chicago office) and his filled-out registration card at a window marked "Registration by Pocket Card."

3. *The registration of members* who have paid their dues, but *who have failed to bring their pocket cards*, will be delayed, while the records are consulted. Hence, be sure to bring your "pocket card."

4. *Members who have not paid* their dues will present registration card and make payment at a window marked "Cash."

5. *Each applicant for membership* will present his registration card at the window marked "New Members," with a certificate of membership in his state society. Prospective members, however, will save delay and annoyance by sending in their applications before the session. All such applications should be mailed to the American Medical Association, 535 Dearborn Avenue, Chicago, so as to arrive not later than June 15.

6. Each member on registration will receive a badge, a copy of the Official Program, containing the full details of the scientific proceedings, invitations to the social functions, and such other announcements as may be necessary.



INFORMATION FOR ARRIVING MEMBERS

The three transcontinental lines which come into Los Angeles are the Southern Pacific Railroad, the Santa Fe Railroad and the Salt Lake Railroad.

Arrangements will be made to have local committeemen at each of these depots. The cars which pass these depots take one to the heart of the business and hotel districts. A reference to the map in this issue showing the different streets and the locations of the hotels and meeting places will make the transfers easy.

The street cars coming from the Santa Fe and the Salt Lake railroads nearly all go south on Broadway, Spring or Main streets, so that one has simply to remember the numerical street number where one wishes to get off. The cars from the Southern Pacific run west and reach the hotel district in the neighborhood of Fourth and Fifth and Spring streets.

Those who arrive in the daytime, if they wish, can take the cars at the Santa Fe and Salt Lake stations and go direct to the Bureau of Information on the fourth floor of the Hamburger Building, which is the block bounded by Eighth, Broadway and Hill streets.

[THIS LOS ANGELES MATTER IS CONTINUED ON PAGE 1521.]

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 Dearborn Avenue . . . Chicago, Ill.

Cable Address . . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

[For other information see second page following reading matter]

SATURDAY, MAY 20, 1911

INTESTINAL ANAEROBES

The problem of the intestinal anaerobic bacteria, though one of enormous complexity, has been attacked by many investigators, and results both interesting and valuable have been obtained. Passini[1] in a recent article has reviewed some of these, and while space will not permit an enumeration of the various workers, their results are of such interest as to warrant their presentation here.

The meconium of the new-born child, as might be expected, is sterile. But in a few hours, depending largely on the child's environment, microorganisms appear in it, and even among these early invaders anaerobic bacteria take an important part. The gas bacillus (*B. welchii*) appears to be the most constant and important of these. With the ingestion of mother's milk the intestinal flora alters, the chief anaerobe now present being the so-called *Bacillus bifidus,* an organism closely akin to, if not identical with, the familiar Oppler-Boas bacillus. Subsequent alterations in food evoke changes in the bacteriology of the child's intestines, and it is only with the adoption of adult diet that the bacteria assume the corresponding type.

Of the various anaerobes the greatest amount of work has been devoted to the butyric-acid-forming group, of which the gas bacillus is a typical example. As with organisms of the colon group, it has been found that the different members, while fairly sharply differentiated from one another, possess intervening types that would make any precise classification a matter of difficulty. Again, as with the colon group, it has been found possible with these bacteria to demonstrate the phenomenon of group agglutination, and thus to support the idea of kinship between the various individual organisms.

The pathologic significance of the anaerobic intestinal flora offers a still comparatively unexplored field. Numerous experiments have led to the belief that bacterial invasion of the alimentary tract is in the main distinctly beneficial, and apparently it is only when certain organisms become unduly predominant, or altered nutrition affords opportunities for abnormal activity of special organisms, that direct harm results. The problems confronting the investigator in this field are of unusual difficulty, and definite etiologic relationships between specific diseases and anaerobic intestinal infections cannot be regarded as absolutely established. Several instances, however, of fairly constant association of the one with the other, are known. Thus Herter[2] has found that primary anemias of the pernicious type are ordinarily associated with predominance of *B. welchii* in the feces. And so, too, the so-called "enteric catarrh" of infancy has received much attention from this point of view. This alimentary disorder follows as a rule on an excessive sugar diet. In the normal infant, sugar digestion and absorption are practically complete before the lower small intestine is reached; but with large amounts of sugar in the diet, this is no longer the case, and an abnormal medium is provided for the anaerobes inhabiting this part of the alimentary tract. Now it has been found that with special media—essentially albuminous material subjected to tryptic digestion, with subsequent addition of sugar—the gas bacillus is capable of producing a substance violently poisonous, in suitable, though small, doses to laboratory animals. It produces rapid death by paralysis of the respiratory center when given intravenously; and when it is injected into the intestines of dogs, violent peristalsis ensues, with temporary recovery and late death from a hemorrhagic inflammation of the intestinal mucosa. When this substance is applied locally to smooth muscle, tetanic contractions of long duration result. It is, of course, unsafe to ascribe to the action of this poison the human clinical picture. But in favor of this view are the following facts: First, in the stools of enteric catarrh the prevailing organism appears to be the gas bacillus; second, the disease occurs, for the most part at least, in cases of excessive sugar-feeding; third, elimination of sugar from the diet, along with improvement in the patient, is accompanied by a change in the intestinal flora, the spore-free sugar-fermenting type of the gas bacillus giving place to the sporing form, typical of growth in sugar-free media; and fourth, on one occasion at least it has been possible to obtain the characteristic poison by alcoholic extraction of the stools in this disease. The poison thus possibly at the bottom of enteric catarrh is apparently not a toxin in the bacteriologic sense. It is relatively very stable to heat and preservation; it can be extracted with alcohol; and attempts to obtain an antitoxin have been unsuccessful. In its formation, the presence of both sugar and the products of tryptic digestion appear to be essential. Whether or not this toxic substance is identical with the butyric acid produced by the organism, cannot be regarded as absolutely settled. McCampbell[3] obtained as poisonous an effect from solutions of butyric acid of strength equivalent to that of the bacterial cultures as from the filtered cultures themselves; but Passini states that neutralization or even alkalinity of his special medium has no effect on the toxicity.

1. Passini: Jahrb. f. Kinderh., 1911, lxxiii, 284.

2. Herter: Jour. Biol. Chem., 1906, ii, 1.
3. McCampbell: Jour. Infect. Dis., 1909, vi, 537.

It is unfortunate that the connection between the results of the laboratory and the clinical pictures is in part at least conjectural. The necessity for further work is of course obvious; but the results hitherto obtained, though not in themselves conclusive, are of such a nature as to invite the investigation that must lead toward ultimate solution of the problems presented.

EUROPE IN ADVANCE OF US—A TRIBUTE TO HERMANN KNAPP

The recent death of Dr. Hermann Knapp has occasioned a reflection not complimentary to the American people. Before he began his American career he had studied in several European universities, and had established a dispensary and hospital for eye diseases which is now a part of the University of Heidelberg, at which he taught four years. The science and the art of ophthalmology in this country were indeed a puny pair of twins until 1868, when Knapp brought us the ophthalmoscope which his teacher, von Helmholtz, had invented seventeen years before, and which von Graefe—of whom Knapp was also a student—had applied to eye diseases. Thus, Knapp's advent among us initiated the special work in orbital practice by which such beneficent results are now every day in evidence.

Soon after he established himself in New York, Dr. Knapp founded the New York Ophthalmological and Aural Institute, where under him many of the foremost workers in eye diseases in this country received their early training. Himself an extensive producer of papers, treatises and text-books, he began those *Archives of Ophthalmology and Otology* which are to-day an imposing monument to his zeal for the dissemination of the best literature in this special field. The span of his life was eight decades; and from his youth almost to his death, he gave to humankind the best of his heart and mind and strength; night and day he worked, sustained by a most inspiring enthusiasm for his calling and for humanity, until several years ago his health quite gave way; the prosperous and the penniless received alike his equal ministrations.

Now, outside his profession, the American people, whom he served with such self-abnegation, have permitted the occasion of his death to pass practically unnoticed; the representative lay press has given his career not nearly as much space as would be devoted to that of a pugilist or a second-rate politician. True, there was that in Dr. Knapp's fine temperament which lent itself to effacement; he shrank ever from ostentation. It was sought repeatedly to give dinners in his honor, to celebrate his anniversaries; on his retirement from the faculty of the College of Physicians and Surgeons the students wanted to commemorate his services; but he would have none of that. For his seventieth birthday a like celebration was planned; but he kept out of the way until the day and the occasion had passed. Loving-cups, engrossed resolutions and the like are indubitably good in their way; but they were not in Dr. Knapp's way.

Now to the point: had Dr. Knapp died in Germany or in France, his beneficent life and labors would have been the themes of grateful and nation-wide eulogy. For example, in Paris, Berthelot was laid in state in the Pantheon, a great assembly giving its presence, the president of the republic, the diplomatic corps, members of the French Academy, judges, deputies, senators, deputations from many societies, taking part; the French Minister of Education related impressively the dead chemist's achievements; the whole Parisian garrison defiled before the catafalque; on that day every school in France was closed.

The honor paid the memory of Pasteur is another instance: There was several years ago a *plébiscite* to determine who were the ten greatest Frenchmen of the nineteenth century; 15.000,000 votes were cast. Who was first? Napoleon? No. Victor Hugo? No. Pasteur headed the list; among the ten were Curie and Roux; Ampère came eleventh; and Arago, the physicist, was fifteenth.

Virchow's funeral was most impressive, in that the whole German people took part. Von Bergman died in Berlin; but on his seventieth birthday (without waiting to bestow posthumous honors, and while he was still in the plenitude of his powers), his fellow-countrymen, both professional and lay, gave him the fullest meed of respect and affection; about forty delegations, bringing gifts of all kinds, consumed nearly five hours in passing before him. The imperial government, and the great seats of learning were represented; men notable in the arts, in music and the drama, and in other lofty pursuits paid tribute to his sympathetic appreciation of professions other than his own; four important works were prepared and published in commemoration of this great birthday.

Thus do they honor science and the humanities on the Continent. We, it would seem, have still considerable progress to make before we reach a like stage in civilization.

THE WISCONSIN PURE FOOD LAW NOT EMASCULATED

Twice before we have called attention to the fact that the people of Wisconsin are not willing to allow the "interests" to dictate to them the terms of their pure food law. When the federal Food and Drugs Act went into effect the "glucose trust" protested against Dr. Wiley's ruling that the company must label its product "glucose," insisting that it should be permitted to use the more euphemistic term, "corn syrup." Its protest was heeded, Dr. Wiley was overruled, and the first breach in the federal Food and Drugs Act was made. The Wisconsin pure food law also requires that the manufacturer tell the truth on his labels and the officers that enforce this law have insisted that glucose should be

called glucose. In this case, also, a protest was made by the trust, but Wisconsin was not so easily cajoled as was Washington. Finding its protest of no avail the "glucose trust" declared a boycott against the state and refused to ship its product into Wisconsin and, what was of still greater moment, it practically ceased advertising in the newspapers of Wisconsin. But the fact that, previous to the boycott, Wisconsin had purchased thousands of pounds of glucose and was therefore a profitable market, caused the makers of this substance to bring to bear all the pressure they could to change the Wisconsin law.

During the early days of the present session of the Wisconsin legislature two bills were introduced by Mr. Perry and Mr. Stevenson, respectively, each having for its purpose the legalizing of the term "corn syrup" as a synonym for glucose. One of these, the Stevenson bill, was withdrawn from the committee and from the assembly, but there was a public hearing on the other. The Perry bill was reported back to the assembly for passage. When the measure came up in the assembly for action on the report of the committee, the bill was killed by the vote of 68 to 22.

This result is cheering to all who believe that pure food laws should be passed and enforced in the interest of the public rather than in the interest of manufacturers. As we have said before, Wisconsin is to be congratulated not only on having an enlightened legislature and a supreme court that interprets the law in the public's interest, but also on having virile and fearless officials who enforce the law without fear or favor.

It now remains to be seen whether the boycott, which the manufacturers of glucose declared, but which was raised during the time that the present legislature was in session, will again be declared against Wisconsin. If a few more states could be prevailed on to insist on the same degree of honesty on the part of manufacturers that Wisconsin requires, it would be but a short time before the Corn Products Refining Company would be only too pleased to label its products "glucose" in accordance with the facts. In the present more or less chaotic condition in the various state food laws, one unfortunate feature is the unfair commercial advantage that a state having loosely liberal laws has over those states which try to protect their citizens by making stringent laws and enforcing them strictly. If competition in the manufacture of glucose were commercially practicable, a boycott on the part of the glucose trust would not be of any great moment, as men of capital would undoubtedly recognize the commercial possibilities of manufacturing glucose within the boycotted state and selling it under its true name. Unfortunately, competition against a practical monopoly, said to be backed by the Standard Oil interests, is probably not commercially practicable.

Against the use of glucose, *per se*, as a food product, we know of no great objection. It is a very inexpensive substitute for real syrup and undoubtedly has a definite food value. Of course, practically all the flavor possessed by the so-called corn syrup preparations, is due to the admixture of cane or some other real syrup with the glucose; for in its pure state glucose is insipid and but very slightly sweet. The fraud on the public consists in selling glucose under the name "corn syrup," for it is not a syrup in the sense understood by the public, namely, the concentrated sap of a sugar-producing plant. The makers of glucose have argued that the word "glucose" is in such ill repute that people will not purchase it under its own name. If this is true, it is all the more reason why the public should not be deceived into purchasing, under a euphemistic name, a substance that they otherwise would not have.

The Corn Products Refining Company, popularly known as the "glucose trust," would have exhibited greater foresightedness and more long-headed business sense if, instead of lobbying against certain features of the Wisconsin Pure Food Law, it had spent the same amount of money on a campaign of education by which the public might learn the harmlessness and food value of glucose. We sometimes wonder how long it will be before all manufacturers that have wholesome products will be willing to sell them honestly and on their merits instead of attempting to build up an artificial demand for them by means of falsehood and political chicanery.

THE USE OF ORANGE-RED UNDERCLOTHING IN THE TROPICS

The theory of Woodruff, that the deterioration of the white man in the tropics is due more to the actinic rays of the sun than to exposure to excessive heat, has found many adherents. With the view of ascertaining the truth or falsity of this hypothesis, the experiments conducted in the Philippines by the Medical Corps of the Army were continued for over a year, and the results are embodied in the last annual report of the Surgeon-General of the Army.[1]

Orange-red underclothing and hat-linings were chosen on account of the known resistance of this color to the actinic rays of the sun. The tests were carried out by making comparisons between 500 soldiers equipped with these garments and 500 controls using white, care being taken to choose the two sets of men from the same companies and to divide them in such a way as to make the two groups as nearly as possible equal in physique. The exceptionally weak and those having had long tropical experience were excluded.

A comparison of the sick reports showed insignificant differences between the two groups, except that there was a higher admission rate for heat exhaustion among those wearing the orange-red underclothing than among the controls. Those wearing orange-red suffered more from perspiration than those wearing white, and extensive experiments, both on and off the body, showed that exposure to the sun caused a greater temperature beneath the colored garments than beneath similar white mate-

1. Report of the Surgeon-General, U. S. Army, 1910, page 118; experiments carried out at certain Philippine posts by Major Collins and First Lieutenants McKenney, Phillips and Cowles.

rial. The fall in blood-pressure, as well as the increase in red blood-cells and diminution in percentage of hemoglobin which the unacclimated suffer in the tropics, was more apparent among the wearers of the orange-red than among the controls. The former also showed a tendency to lose weight more rapidly than the latter. Fifteen hundred observations showed temperature, pulse and respiration to be slightly higher for the orange-red group than for the controls. The impressions of the individual wearers were, on the whole, decidedly adverse to the colored underwear. There were only sixteen men who preferred it to the white. Fifty-four expressed no choice, but the remainder, constituting nearly four hundred men, expressed their disapproval. The consensus of opinion seemed to be that it was more uncomfortable, the discomfort being, in the main, attributed to the excessive perspiration which it caused. It is significant that no organization commander saw any benefit from its use, and that of sixteen officers who gave it a personal trial there was only one who expressed approval.

The medical officers who conducted the experiments reached the general conclusion that the test undercloth-ing was of no material value, but that, on the contrary, it increased the burden of heat which the system was compelled to endure. They are of the opinion that the sun's rays alone are not responsible for the physiologic effects of the climate in the Philippines, and that, even if the actinic rays have any influence at all on the system, the campaign hat and the khaki uniform constitute a sufficient protection against them.

Current Comment

THE PROBLEM OF PURE MILK

In a recent issue[1] we commented briefly on the report of the Philadelphia Milk Commission. At that time the full report was not at hand. It has since been printed, however, and is available for study by those interested in clean, healthful milk, and that should include every citizen, be he health officer or other public official, or private individual. The report may be heartily recommended for study, too, as it covers one of the most searching investigations of this important problem yet published, and sets forth a complete scheme of regulations for the production, transportation, handling and delivery of milk to the consumer, proposes a plan of reorganization of the division of milk inspection of the health department, and reports on chemical and bacteriologic standards. The commission says that the problem of the safeguarding of milk-supplies for municipalities is too large and too serious to be considered solely from the point of view of the effect that regulation might have on the commercial interests involved, which has been the point of view generally adopted hitherto. Bad milk is one of the great factors in the production of the enormous death-rate of infants under one year of age. It also figures largely in the propagation of typhoid fever, diphtheria, scarlet fever and tuberculosis. The regulation of milk production, transportation and subsequent handling, therefore, becomes one of our most serious problems. The investigations of the commission in many instances revealed wretched conditions in all the stages of the milk business from the producer to the consumer; the members say that to permit the continuation of the milk business under existing conditions could only contribute to the mortality of the community. The most valuable feature of the report is not that it exposes and condemns conditions in Philadelphia particularly, but that its findings and its comprehensive plan for remedying them might be applied with but little modification to almost any other city. The report is a valuable municipal text-book on the milk question.

1. March 11, 1911, p. 749

MAKING ROOM FOR CITY PARKS

The growth of many cities in the United States has been so rapid that proper provision has not been made for adequate public parks and breathing-places for the people. Recent agitation for more parks and playgrounds, and for the general sanitation and hygiene of cities, has resulted in the making of parks at enormous expense in the midst of thickly populated districts. In New York City the necessity for further parks and also for greater dockage facilities in the harbor has culminated in a scheme for the creation of a park in the air, so to speak. At the present time nearly the whole of the west side of Manhattan Island is occupied by the New York Central Railroad tracks, and a plan has been devised whereby a space 200 feet wide and several miles long will be converted into additional space for railroads and docks by filling in along the water-front. It is proposed[1] to cover over this entire space by heavy steel and concrete roofing and then to fill in this roof with soil and make a water-front park. Most cities having water-fronts have allowed these naturally advantageous locations for parks to be absorbed by railroads or other industrial enterprises. Chicago, with its wonderful water-front on Lake Michigan, has allowed this to happen, to a certain extent. The plan of New York, though an expensive one, seems to be entirely feasible; at least, it has been so pronounced by engineers. Certainly it would form a most attractive addition to the park system of that city.

1. Plan of Park Commissioner Stover and Dock Commissioner Tomkins; described in Scient. Am., May 6, 1911, p. 446.

FREE DISPENSARIES FOR HOOKWORM DISEASE

The idea of the free dispensary as a factor in suppressing hookworm infection originated in Mississippi, where the first institution of this kind was organized at Columbia, Marion County, in December, 1910, and is now running a full capacity of 300 patients monthly. The Columbia Dispensary is supported by public and private cooperation, the county health officer having given the use of a four-room building for twelve months, the necessary drugs being supplied by the county board of supervisors, while the beds and other hospital appointments are furnished by the Columbia County Club, and the linen by the women's clubs of the city. A trained nurse has been installed to take care of the dispensary and its patients and people are now coming in for examination

and treatment from a radius of over twenty miles. Resting as well as ambulant patients are treated and applications for beds are now sent in well in advance. The Mississippi idea has already begun to take root in other southern states. In Alabama, for instance, there are four dispensaries in Geneva County, five in Dale County, three in Coffee County and two at Houston. Very significant are the results already obtained at the "free clinics" in Coffee County, which are hardly a month old. A circular distributed through the county in March announced that free clinics for hookworm patients would be held at Elba, Brockton and Enterprise at stated intervals. Up to April 14, the total number of patients treated at the three clinics was 1,416, and on one day (April 8) as many as 439 patients applied for treatment at Enterprise alone. In addition, two local county newspapers have engaged to mail 1,000 copies each of a folding circular on sanitary privies to their subscribers. We congratulate the public health authorities of these southern states on the important sanitary work they are doing and hope their example will stimulate other states to similar efforts in the same direction.

PERSECUTION OF DR. KANTOR, THE FOE OF QUACKERY

We have frequently had occasion to commend the organ of the German Antiquackery Society, the *Gesundheitslehrer,* published by Dr. Kantor of Warnsdorf, Bohemia. Dr. Kantor has often been sued for damages by persons and firms injured by his propaganda for reform and exposures of fraudulent proprietaries, and he still has a number of suits on hand. An anonymous pamphlet calumniating his personal and professional character has recently been scattered broadcast. As the slandered physician has no means of legal redress against the authors or instigators of this attack, he has sent to the medical press a reply denouncing the pamphlet as a collection of falsehoods and perversions of fact intended to discredit him, both professionally and as the publisher of the *Gesundheitslehrer.* He adds that, notwithstanding the numerous suits that have been brought against him, no one has succeeded in producing any evidence of dishonorable conduct on his part, either private or professional, and that moneyed interests are bringing every means to bear in order to down him, or to disgust him with his difficult struggle against quackery. His sturdy little monthly costs only seventy-five cents a year and contains a fund of information, written in popular German, on nostrums and different phases of the practice of medicine by unqualified persons. It is to be hoped that Dr. Kantor will receive still more of the support of the German medical profession and of the intelligent lay public in his campaign against the nostrum evil. For a private individual to oppose single-handed the powerful interests involved requires courage and determination of a high order, since the attempt would appear hopeless to an ordinary character. We in America may congratulate ourselves at least on the fact that the organized medical profession has taken a firm stand on the subject, in which it has been sustained by the more progressive portion of the lay press.

Medical News

ARKANSAS

State Medical Society Meeting.—The thirty-fifth annual meeting of the Arkansas Medical Society was held in Fort Smith, May 2-5, under the presidency of Dr. Robinson C. Dorr, Batesville. Hot Springs was selected as the place of meeting for 1912, and the following officers were elected: president, Dr. Morgan Smith, Little Rock; vice-presidents, Drs. James B. Roe, Calico Rock; William W. York, Ashdown, and John W. Webster, Siloam Springs; secretary, Dr. Clinton P. Meriwether, Little Rock; treasurer, Dr. John S. Wood, Hot Springs; delegate to the American Medical Association, Dr. Gus A. Warren, Black Rock; alternate, Dr. John W. Webster, Siloam Springs, and councilors, first district, Dr. Hughey, Knoble; second district, Dr. James H. Kennerly, Batesville; third district, Dr. Tillman B. Bradford, Cotton Plant; fourth district, Dr. Arthur D. Knott, Wilmot; fifth district, Dr. Robert A. Hilton, El Dorado; sixth district, Dr. Leonce J. Kosminsky, Texarkana; seventh district, Dr. Reuben Phillips, Malvern; eighth district, Dr. A. H. McKenzie, Dardanelle; ninth district, Dr. Frank B. Kirby, Harrison, and tenth district, Dr. Matt S. Dibrell, Van Buren.

CALIFORNIA

Builds Sanatorium.—Dr. G. Richard Hickok, Gardnerville, Nev., is about to establish a tuberculosis sanatorium at Badger, 35 miles northeast of Visalia, and has purchased 880 acres as a site.

Illegal Practitioner Sentenced.—Mrs. Salvatrice Mingilino, San Francisco, arrested at the instance of the State Board of Medical Examiners, is said to have been found guilty of practicing medicine without a license and to have been fined $100, with the alternative of fifty days imprisonment in the county jail.

Personal.—Dr. Charles F. Whitmer, Oakland, fell from a tree, May 2, fracturing his left leg.——Dr. Stanley P. Black has been appointed city health inspector of Pasadena.——Dr. William R. Dorr, warden of the City and County Hospital, San Francisco, has resigned.——Dr. George B. Walrath, Los Angeles, while attempting to board a rapidly moving car at Venice was thrown to the ground, fracturing several ribs.——Dr. Edgar W. Clark, Los Angeles, is reported to be seriously ill at his home.——Dr. Charles C. Browning, Monrovia, while in attendance at a meeting of the State Board of Health at Santa Barbara, had an attack of acute appendicitis and was taken to the Good Samaritan Hospital, Los Angeles, where an operation was performed April 20.

Tuberculosis Bill Passed.—Assembly Bill No. 821, introduced by Assemblyman Bliss at the instance of the Alameda Society for the Study and Prevention of Tuberculosis, was passed by the legislature and signed by the governor. The purpose of the new law, which carries with it an appropriation of $5,000, is set forth in the first two sections of the bill, which read as follows:

Section 1.—It shall be the duty of the State Board of Health to cause special investigation of the prevalence of tuberculosis in California and the effects of localities, employments, conditions and circumstances on the health of those developing the disease, and to determine the best means for its eradication.

Sec. 2.—The State Board of Health shall publish or procure and distribute free to the people of the state of California printed matter, charts, pictures or models, or demonstrate to them in any practical way the prevalence of tuberculosis, the danger of infection therefrom and the means of prevention.

COLORADO

Asks Wards for Drug Addicts.—Dr. Elizabeth Cassidy recommended to the Board of County Commissioners of Denver County that wards at the county jail be set aside for users of cocain, morphin, opium and other drugs, and that the older addicts be segregated from the beginners.

Grants Petition.—District Judge Allen has granted the petition of Dr. Elizabeth Cassidy, Denver, a member of the Board of County Commissioners, to have the proceedings of the board for several months investigated by the district court. Dr. Cassidy's advocation contends that the board is wasting at least $30,000 annually, and that claims are not carefully investigated before payment.

Personal.—Dr. Elizabeth C. Cassidy, Denver, has been appointed a member of the State Board of Charities and Corrections.——Dr. Paul S. Hunter, Denver, has been appointed secretary of the State Board of Health.——Drs. W. W. Flora, Colorado Springs, and George Sullivan, Victor, have been made members of the Board of Dental Examiners, and Dr. Charles

S. Morrison, Colorado City, has been appointed a member of the Lunacy Commission.——Dr. Edgar D. Heaton, Centerville, Ia., was thrown from his bicycle, April 27, fracturing his right arm below the elbow.——Dr. Sherman Williams, Denver, has been appointed a member of the State Board of Health, vice Dr. Minnie C. T. Love.

ILLINOIS

State Board Prosecution.—L. C. Crump, indicted on charges by the State Board of Health for the illegal practice of medicine, was tried before a jury in the municipal court, Chicago, and fined $100 and costs. The defendant is said to have issued a card setting forth that he is a man of God and a divine healer. He is said to have examined each of those who applied to him, prayed with him, given him a big bottle of medicine and charged $1.

Personal.—Dr. Joseph C. Myers, Clinton, who has been ill in Decatur, has returned home.——Dr. and Mrs. Martin Van Buren Montgomery, Opdyke, celebrated their golden wedding anniversary, May 6.——Dr. Frank L. Hall, Jacksonville, has retired from the practice of medicine.——Dr. Benamjin P. Marsh, Bloomington, is reported to be ill with neurasthenia. ——Dr. Henry J. Gahagan has been named as city physician of Elgin.——Dr. Charles G. Beard, Sterling, has been appointed district surgeon for the Northwestern System, vice Dr. Frank Anthony, Sterling, deceased.

Society Meetings.—At the annual meeting of the Brainard District Medical Society, held in joint session with the Logan County Medical Society at Lincoln, April 27, the following officers were elected: President, Dr. Edwin P. Sloan, Bloomington; vice-presidents, Drs. Charles W. Carter, Clinton; Charles B. Caldwell, Lincoln, and Robert A. Noble, Bloomington; secretary, Dr. Harry S. Oyler, Lincoln; treasurer, Dr. Charles C. Reed, Lincoln, and censor, Dr. Athens L. Brittin, Atlanta.——DeKalb County Medical Association, at its annual meeting held in Sycamore, April 28, elected Dr. Charles H. Mordoff, Genoa, president; Dr. John B. Nesbitt, Sycamore, vice-president, and Dr. Stoddard L. Anderson, DeKalb, secretary and treasurer.——The Elgin Physicians' Club, at its annual meeting, May 1, elected Dr. George J. Schneider, president; Dr. Edward H. Abbott, vice-president; Dr. Jane Trull, secretary and treasurer, and Dr. Charles E. Sisson, a member of the executive board.——La Salle County Medical Society, at its annual meeting held in Ottawa, April 25, elected Dr. Everett H. Butterfield, Ottawa, president; Dr. Milton E. Blanchard, Marseilles, vice-president; Dr. Albert J. Roberts, Ottawa, secretary and treasurer; Dr. George A. Discus, Streator, censor; Dr. William O. Ensign, Rutland, delegate to the state society, and Dr. William Schoenneshofer, Lostant, alternate.

Chicago

Sanatorium Site Chosen.—The Paul Lawrence Dunbar Sanatorium for Colored Tuberculosis Patients will be established on a tract of land nine acres in extent, lying between Washington Heights and Morgan Park.

Playground Established at Hospital.—A playground for the exclusive use of convalescent children has been established by St. Luke's Hospital on a lot 50 feet by 163, adjoining the institution, which has been purchased and will be fenced in and equipped with outdoor gymnastic apparatus.

Suburban Hospital.—Thirty-five physicians of Oak Park, Austin, Elmhurst and Melrose Park met at the Oak Park Club, May 15, and organized the Suburban Hospital Association. The following officers were elected: President, Dr. Charles E. Humiston, Austin; vice-president, Dr. Charles W. Poorman, Oak Park; secretary, Dr. Fred W. Kettlestrings, Oak Park, and treasurer, Dr. Thomas E. Motter, Oak Park. Drs. Humiston, Poorman and William G. Willard were appointed members of the site committee.

Personal.—Dr. Henry J. Pieper, of the University of Chicago, has been appointed assistant professor of physiology in Columbia University.——Dr. and Mrs. Eugene S. Talbot and daughter sailed for Europe, May 20.——Dr. Fenton B. Turck gave a reception to the class of 1891 of Northwestern University Medical School at his house, May 6.——Dr. John B. Murphy is reported convalescent after an attack of typhoid fever. ——Dr. Walter B. Schwuchow has moved to Los Angeles, Cal. ——Dr. Samuel W. Forney has moved from Chicago to Boise, Ida.

INDIANA

Alumni to Meet.—The Alumni Association of the Indiana University School of Medicine will hold its annual meeting at Indianapolis, May 29. In the evening a banquet will be given at the Columbia Club.

Fly Catechism.—Dr. Charles S. Woods of the City Sanatorium of Indianapolis distributed 30,000 leaflets to the school children of that city on the care of the teeth and also a fly catechism dealing with the province of the ills due to the house fly.

Handling of Foodstuffs.—At a special meeting of the State Board of Health, three rules were added to the regulations for the handling of foodstuffs. The first provides that hotels and restaurants shall be classified as cold storage plants, except when the storage is less than thirty days. The other two rules refer to the handling of dairy products in unsanitary dairies or manufactories, and provide that it becomes a violation of the law for milk, butter, cheese or other milk products to be offered for sale when the product is from an establishment that has been condemned by the board.

Personal.—Dr. Mary E. Jackson, Hammond, who was operated on at the Mary Thompson Hospital, Chicago, for the removal of gall-stones, has returned to her home, convalescent. ——Dr. Stanley W. Edwins, Elwood, has retired after fifty-five years of practice.——Dr. Orange G. Pfaff, Indianapolis, who has been ill for several weeks from septicemia is convalescent and has gone to Atlantic City.——Dr. Fairfield Snyder, Corunna, has been declared of unsound mind and application has been made for his admission to the Longcliffe Hospital. ——Dr. James Trelor Tresidder, Tipton, has gone to Indianapolis for operation.

State Board Prosecutions.—Dr. Rudolph C. Tilley, who is said to have taken two examinations before the State Board but failed to obtain the proper certificates, was arrested on the charge of practicing medicine without a license at Lawrenceburg and fined $25.00 and costs.——At a meeting of the State Board of Medical Registration and Examination, May 11, the license of Dr. William McKinstray, South Bend, is said to have been revoked on an affidavit filed by Dr. Alexander P. Forbes Gammack, and afterward verified, which stated that Dr. McKinstray had purchased his diploma from the National Medical University of Chicago.

MARYLAND

Officers Hold Over.—Under an amendment to the constitution adopted at the late meeting of the Medical and Chirurgical Faculty of Maryland, the new officers will not assume their duties until Jan. 1, 1912, the officers of 1910 holding over until that time.

Personal.—Dr. Henry W. McComas has been elected secretary of the Board of Health of Garrett County and physician to the County Jail, vice Dr. John C. Legge.——Dr. Charles M. Ellis, Elkton, is reported to be critically ill at Johns Hopkins Hospital, following a surgical operation.

Baltimore

Personal.—Dr. Harry Friedenwald sails for Europe, May 13.——Dr. George A. Strauss, Jr., who was operated on at Mercy Hospital, May 7, is reported to be convalescent.——Dr. Marcus S. Dillon has been appointed medical supervisor of the Franklin Square Hospital of the Maryland Medical School, vice Dr. James A. Duff.

Endows Hospital and Industrial School.—James L. Kernan has placed on record deeds of trust whereby the net dividends from 3,400 shares of the capital stock of the James L. Kernan Company will be applied, at his death, to the James Lawrence Kernan Hospital and Industrial School for Crippled Children founded by him at Radnor Park.

Dispensary Election.—At the annual meeting of the board of directors of the Baltimore Eastern Dispensary, held May 8, Dr. Daniel W. Cathell was elected president, Drs. George F. Hancock and Frank C. Bressler were elected directors, and Dr. Robert S. Kirk was reelected superintendent for the twelfth year. During the year just ended, 25,840 patients were given treatment at the institution.

Will Ask Enabling Act.—The Municipal Tuberculosis Commission will ask the next legislature for an enabling act to allow Baltimore to float a loan to provide for a hospital to accommodate three hundred tuberculosis patients. Baltimore is said to have been the first city to inaugurate a systematic fight against tuberculosis. Mrs. William Osler raised a fund and paid a nurse to investigate cases throughout the city and to instruct those afflicted as to their care. The Maryland Association for the Prevention and Relief of Tuberculosis then came into existence and took up the work, employing four nurses. A few years later the work became so heavy that the city was called on to take charge and provided fifteen public nurses, and it is believed that next year twenty-five nurses will be needed.

XUM

MASSACHUSETTS

Personal.—Drs. John L. Ames and Arthur B. Coffin, Boston, have resigned as school physicians.——Dr. Patrick H. Mullowney has been appointed a member of the Boston Board of Health.

Physicians to Aid Foreigners.—At the recent missionary jubilee in Boston, a number of women physicians organized the Medical Women's Association for Aiding Women in Medical Work in Foreign Countries; and elected the following officers: president, Dr. Frances M. Morris; vice-presidents, Drs. Helen I. Woodworth and Edith Hale Swift; secretary, Dr. Blanche A. Denig, and treasurer, Dr. Mary R. Mulliner, all of Boston. The object of the association is to raise money to endow already existing medical institutions for women in foreign countries; to provide scholarships for native women in medical schools; to take a personal interest in women medical students who are studying to enter the foreign field, and to provide equipment and hospital facilities as far as possible.

District Society Elections.—At the annual meeting of Essex North District Medical Society, held in Lawrence, May 3, the following officers were elected: president, Dr. Warren W. Pillsbury, Newburyport; vice-president, Dr. William H. Merrill, Lawrence; secretary-treasurer, Dr. J. Forrest Burnham, Lawrence; commissioner of trials, Dr. John F. Croston, Haverhill; nominating councilor, Dr. Israel J. Clarke, Haverhill; alternate, Dr. Charles G. Carleton, Lawrence; supervising censor, Dr. Frank B. Pierce, Haverhill; censors, Drs. Robert M. Birmingham, Lawrence; John A. Magee, Lawrence, John A. Fitz-Hugh, Amesbury, and Thomas R. Healy, Newburyport, and councilors, Drs. Charles G. Carleton, Lawrence, Israel J. Clarke, Haverhill, John A. Douglass, Amesbury, Ernest H. Noyes, Newburyport, Frank B. Pierce, Haverhill, Frank W. Snow, Newburyport, Frederick E. Sweetsir, Merrimac, and J. Forrest Burnham, Lawrence.——At the annual meeting of Berkshire District Medical Society, held in Pittsfield, April 27, the following officers were elected: President, Dr. Clifford S. Chapin, Great Barrington; vice-president, Dr. Isaac S. F. Dodd, Pittsfield, and treasurer, Dr. Joseph D. Howe, Pittsfield. ——At the annual meeting of the Springfield Academy of Medicine, Prof. John M. Tyler, Amherst, gave an address on biology. The following officers were elected: president, Dr. Philip Kilroy; vice-presidents, Drs. Ralph H. Seelye and J. B. Cummings; secretary, Dr. Alexander C. Eastman; treasurer, Dr. John M. Birnie, all of Springfield, and censor, Dr. J. Clark Hubbard, Holyoke.

MICHIGAN

Pays for Registration of Births.—The state has begun the payment of approximately $36,000 to Detroit physicians for registration of births during 1910.

Antituberculosis Work.—At the first regular meeting of the Saginaw Antituberculosis Society, held May 3, Dr. George L. Alger, Saginaw, was elected president, and it was planned to launch an extensive campaign with lectures, literature and personal effort.——An antituberculosis league has been started in Adrian. A committee was appointed on constitution and by-laws on which Dr. Eli T. Morden was made chairman.

Personal.—Dr. Edwin Goodwin has been appointed health officer of Bay City.——Dr. Ross U. Adams, Kalamazoo, who has been in the Borgess Hospital with septicemia, due to an operation wound, is reported to be much improved.——Dr. Clarke B. Fulkerson has been reappointed city bacteriologist of Kalamazoo.——Dr. Jos. B. Griswold, Grand Rapids, has been appointed a member of the Board of Control of the Soldiers' Home in that city.——Dr. William A. Wilson, Detroit, has been reelected national president of the Federation of Florence Crittenton Leagues.

Alumni Week at Detroit.—Alumni week will be celebrated by the Detroit College of Medicine with a series of clinics extending from May 17 to May 25, inclusive. The special features of the week are clinics by Drs. Albert J. Ochsner, Chicago, on "General Surgery;" Jesse S. Myer, St. Louis, on "Cardiospasm;" Emilius C. Dudley, Chicago, on "Gynecology;" George W. Crile, Cleveland, O., on "Surgery;" Jay F. Schamberg, Philadelphia, on "Dermatology;" Charles S. Williamson, Chicago, on "Heart Disease;" Edward L. Keyes, Jr., New York, on "Genito-Urinary Diseases," and William T. Henderson, Mobile, Ala., on "Local Anesthesia in Hernia." On May 19 the alumni will be given a lunch at the Ford Motor factory and in the afternoon will inspect the Walker-Gordon farm near Birmingham. On May 23 there will be a boat ride to the St. Clair flats, following an inspection of the research laboratory of Parke, Davis and Company; and on May 25 there will be a luncheon at Harmonie Hall, followed by the annual meeting of the association.

MISSOURI

Hospital Cornerstone Laid.—The cornerstone of the new German Hospital at Kansas City was laid with formal ceremonies, April 30. The building is to cost $150,000 and marks the completion of a quarter of a century's existence of the institution.

Changes in State Institutions.—Dr. Robert Scott Magee, Green City, assistant superintendent of the State Hospital, No. 3, Fulton, has been appointed acting superintendent of the State Hospital, No. 4, Farmington, vice Dr. Robert E. Keaney, Farmington, resigned.——Dr. Porter E. Williams, Clarksburg, with two other members of the State Board of Charities, has been detailed to go to Farmington and make an investigation of the system and methods there in vogue.——Drs. Henry Lloyd and Frank S. Weber, assistants at the State Hospital, No. 4, Farmington, have resigned.

Society Proceedings.—Carroll County Medical Society was reorganized at Carrolton, April 24, and the following officers were elected: president, Dr. Richard F. Cook; vice-presidents, Drs. William C. Baird, Bogard, and Strong, Norborne; secretary and treasurer, Dr. H. Jackson Harrell, St. Louis; delegate to the state association, Dr. Edward H. Musson, Norborne, and alternate, Dr. Rezin C. Shawhan.——At the annual meeting of the Linton District Medical Society, held in Mexico, May 2, the following officers were elected: president, Dr. Robert C. Strode, Mexico; vice-presidents, Drs. August W. Kampschmidt, Columbia, and Frank J. Tainter, St. Charles; secretary, Dr. R. T. Gibbs, Mexico, and treasurer, Dr. Ned R. Rodes, Mexico.

St. Louis

Inebriates' Home.—The St. Louis Society of Medical Research inaugurated a movement at its meeting, May 7, for a state home for inebriates, to cost $100,000. The plan is to establish a colony to which inebriates may be committed for indeterminate sentences.

Personal.—Dr. Henry S. Atkins, superintendent of the municipal sanatorium, has resigned.——Dr. Edward L. Cooley has returned from abroad.——Dr. Max Starkloff, newly appointed health commissioner, has been appointed registrar of vital statistics.

Hospital Board Needs More Money.—The hospital board has asked the municipal assembly to appropriate $200,000 in addition to the appropriation of $700,000 already made, for its uses. This amount is to go toward the maintenance of the City Hospital, the sanatorium, infirmary, Robert Koch Hospital and the city dispensaries.

Research Society Organized.—The St. Louis Society of Research in Tuberculosis was organized April 20. The object of the society is to stimulate research in problems connected both with medical and surgical tuberculosis. Dr. William Porter was elected president, Dr. Louis C. Boisliniere, vice-president, and Dr. Ross Hopkins, secretary.

NEBRASKA

County Society Meeting.—Sherman County Medical Society, at its annual meeting held in Loup City, May 2, elected Dr. Mary A. K. Hendrickson, president; Dr. Archibald J. Kearns, Loup City, vice-president, and Dr. Anton E. Wanek, Ashton, secretary and treasurer.

Rush Alumni of Nebraska Hold Meeting.—The annual meeting of the Rush Alumni Association of Nebraska was held in Omaha, April 30. Dr. John M. Dodson, dean of the college, was the guest of honor and delivered an address on the "History of Rush Medical College." Dr. Frank E. Coulter, Omaha, was elected president, and Dr. Rodney Bliss, Omaha, secretary of the society.

State Association Meeting.—The forty-third annual meeting of the Nebraska State Medical Association was held in Omaha, May 2-4, and the following officers were elected: president, Dr. Andrew D. Nesbitt, Tekamah; vice-presidents, Drs. N. T. Johnston, Upland, and Voorhees Lucas, North Platte; secretary, Dr. Alonzo D. Wilkinson, Lincoln (reelected); treasurer, Dr. Alexander S. Von Mansfelde, Ashland (reelected); chairman of the board of councilors, Dr. Harvey H. Bellwood, Alliance, and delegate to the American Medical Association, Dr. A. R. Mitchell, Lincoln.

College News.—The Nebraska legislature has passed a bill, which has been signed by the governor, appropriating $100,000 with which to begin the development of the campus of the College of Medicine of the State University in Omaha. This is the first step toward the development of a complete medical college plant.——Fire in the elevator shaft of Creighton College, May 8, caused a loss of more than $60,000. The chief

damage was caused to the laboratories of the institution.——The commencement exercises of Creighton University were held, April 29, and a class of forty-three was graduated from the medical department.——At the annual meeting of the Creighton Alumni Association, April 27, Dr. Gustav Hahn, Omaha, was elected president, and Dr. Rudolph Rix, Omaha, secretary and treasurer (reelected for the twelfth successive term).

NEW JERSEY

Health Board Reorganizes.—The State Board of Health met for reorganization in Trenton, May 9. J. H. Capstich, Montville, was elected president, and Bruce S. Keater, Asbury Park, was reelected secretary.

Personal.—Dr. Edmund L. B. Godfrey, Camden, has been appointed Surgeon General of the National Guard of New Jersey, with the rank of brigadier general.——Dr. Edward A. Ayers has been appointed president of the Board of Health of Newton.——Dr. David B. Ackley, Trenton, is reported to be ill with septicemia as result of an operation wound of the hand.

Society Meetings.—The Middlesex Medical Society held its annual meeting in New Brunswick, April 20, and elected Dr. John L. Lund, Perth Amboy, president; Dr. Howard Crosby Vorhees, New Brunswick, vice-president; Dr. Martin Stoetzel Meinzer, Perth Amboy, secretary; Dr. David Combs English, New Brunswick, treasurer, and delegates to the state society, Drs. William E. Ramsay and John L. MacDowell, Perth Amboy.——At the annual meeting of the Hudson County Medical Society, held in Hoboken, Dr. George Myrtle Culver was elected president; Dr. Frank F. Bowyer, vice-president; Dr. Charles H. Finke, Jersey City, secretary; Dr. Henry H. Brinkerhoff, treasurer, and Dr. Joseph Abraham Koppell, reporter.——At the annual meeting of the Passaic County Medical Society, held in Paterson, April 11, the following officers were elected: Dr. William S. Flitcroft, president; Dr. Robert Morison Curts, vice-president; Dr. Joseph Allen Maclay, secretary (reelected); Dr. William Wallace MacAlister, treasurer; Dr. Thomas Arthur Clay, reporter; Dr. Charles H. Scribner, censor; Drs. Edgar Carroll Dayton and Joseph V. Bergin, permanent delegates, and Drs. Benjamin H. Rogers, James H. Curts, Frank Joseph Keller, James Alexander Browne, Thomas A. Dingman and Orville Reed Hagen, annual delegates.

NEW YORK

County Society Meeting.—The annual meeting of the Schuyler Medical Society was held in Watkins, May 9, and the following officers were elected: President, Dr. John M. Quirk, Montour Falls; vice-president, Dr. Arthur H. Jackson, Odessa; secretary, Dr. John M. Swan, Watkins, and treasurer, Dr. Delivan W. Scutt, Watkins.

Vetoes Site for City Hospital.—Mayor Furhman has vetoed the West Farm site for the proposed Buffalo General Hospital. This site had been agreed on by all concerned as favorable and contains 81 acres, whereas the site favored by the mayor is the one on which the present Erie County Hospital is located and comprises only 47½ acres.

New Buildings Needed for Sanatorium.—Mountain Sanatorium, Binghamton, is in further need of a building in which patients in advanced stages of tuberculosis, or moribund, may be cared for. The building proposed will be about 24 feet square, with male and female wards, and a room adjoining for the use of the nurse in charge of the building.

New York City

Gift to Columbia.—Columbia University has received an anonymous gift of $10,000 annually for four years, to be used in surgical research.

Personal.—Dr. Winford H. Smith sailed for Europe, May 25. He will assume charge of his duties as superintendent of Johns Hopkins Hospital about the middle of August.——Dr. Edwin H. Fiske, Brooklyn, has been appointed a police surgeon, vice Dr. Charles H. Terry, retired.

NORTH CAROLINA

Personal.—Dr. Francis O. Rogers, Concord, is about to remove to Galveston, Tex.——Dr. Baxter B. Hunter, Kings Mountain, has returned from New York City and is about to reenter practice in Charlotte.——Drs. J. Howell Way, Waynesville, and William O. Spencer, Winston, have been recommissioned members of the State Board of Health for six years.

To Have County Superintendent of Health.—The commissioners of Gilford have decided to elect a county superintendent of health at a salary of $2,500 per annum, requiring the individual so elected to devote his entire time to the care of the inmates of the various county institutions and the instruction of the children in the schools throughout the county in hygienic living.

The Hookworm Campaign.—The campaign against hookworm in the state continues active. Last week Dr. Platt W. Covington, Rockingham, was added to the field force which now includes four traveling physicians under the direction of Dr. John A. Ferrall, assistant secretary for hookworm of the State Board of Health. Six microscopists in the Laboratory of Hygiene at Raleigh are devoting their entire time to the investigation of specimens sent in.

NORTH DAKOTA

Physicians of State Hold Meeting.—The North Dakota State Medical Association held its twenty-fourth annual meeting in Fargo, May 9-11, and elected the following officers: president, Dr. Clinton E. Spicer, Litchville; vice-presidents, Drs. Alexander J. McCannell, Minot; Murdock MacGregor, Fargo, and R. Hudson Beek, Lakota; secretary, Dr. Hezekiah J. Rowe, Casselton (reelected); treasurer, Dr. Frank J. King, St. Thomas (reelected); councilors, Drs. Francis R. Smyth, Bismarck; Henry M. Wheeler, Grand Forks, and Andrew Clark; delegate to the American Medical Association, Dr. Victor H. Stickney, Dickinson, and alternate, Dr. Henry H. Healy, Grand Forks. Valley City was selected as the place of meeting for 1912.

OHIO

Cleveland Personal.—Dr. James D. Pilcher, who was recently operated on for appendicitis, is reported to be making good progress toward recovery.——Dr. Henry J. Gerstenberger has been appointed a member of the Cleveland Milk Commission, vice Dr. Edward F. Cushing, deceased.——Dr. George N. Upson was recently operated on for hernia and adhesions, following appendectomy.

State Association Meeting.—The sixty-sixth annual meeting of the Ohio State Medical Association was held in Cleveland, May 9-11, the Cleveland Academy of Medicine acting as host. The annual address on surgery was delivered by Dr. J. Chalmers Da Costa, Philadelphia, and it was decided to hold the next annual meeting in Dayton. The following officers were elected: president, Dr. Horace Bonner, Dayton; vice-presidents, Drs. Charles B. Parker, Cleveland; John C. Larkin, Hillsboro; George W. Hixson, Cambridge, and Sidney D. Foster, Toledo; councilors, Drs. Dana O. Weeks, Marion, and William E. Wright, Newark; secretary, Dr. John H. J. Upham, Columbus, and treasurer, Dr. Joseph A. Duncan, Toledo. A report of the scientific proceedings will appear in THE JOURNAL.

OKLAHOMA

Health Officers Meet.—The Oklahoma State Health Association, at its annual meeting in Muskogee, May 10, elected Dr. W. E. Wright, Tulsa, president; Dr. William G. Blake, Tahlequah, vice-president, and Dr. Joseph C. Ambrister, Chickasha, secretary-treasurer.

Woman's Auxiliary Meeting.—The Woman's Auxiliary of the Oklahoma State Medical Association, at its meeting in Muskogee, May 11, elected Mrs. W. C. Mitchiner, Okmulgee, president; Mrs. David A. Myers, Lawton, and Mrs. Walter B. Reeves, Wapanucka, vice-presidents; Mrs. Patrick H. Mayginnes, Tulsa, secretary and Mrs. John F. Duckworth, Tahlequah, treasurer.

Personal.—Captain Hugh Scott, M.C., N.G. Oklahoma, Waukamis, has been detailed to attend the army maneuvers at San Antonio.——Fire in the Westfall building, Oklahoma City, did great damage to the offices of Drs. Everett E. Phillips and Arthur L. Edington.——Dr. William Ernest Floyd, Coweta, has been appointed physician of Wagner County.

New Medical Examining Board.—The State Board of Medical Examiners held its meeting for organization in Oklahoma City, April 12, and elected Dr. Francis B. Fite, Muskogee, president; Dr. R. Ellis Sawyer, Durant, vice-president; Dr. John W. Duke, Guthrie, secretary, and Dr. F. A. Englehart, Oklahoma City, treasurer.——Dr. Jesse L. Wharton, Duncan, has been appointed a member of the State Board of Medical Examiners, vice Dr. D. C. F. Stillwell, Piedmont.

State Society Election.—At the nineteenth annual meeting of the Oklahoma State Medical Association, held in Muskogee, May 9-11, the following officers were elected: president, Dr. Charles L. Reeder, Tulsa; vice-presidents, Drs. James L. Shuler, Durant; H. Marion Williams, Wellston, and John W. Duke, Guthrie; secretary-treasurer, Dr. Claude A. Thompson, Mus-

XUM

kogee (reelected), and chairman of the department on the eye, ear, nose and throat, Dr. W. Albert Cook, Tulsa. Shawnee was selected as the next place of meeting.

PENNSYLVANIA

Personal.—Dr. Oscar Kniffler, Pittsburg, has decided to move to Wiesbaden, Germany, on account of the health of his wife. ——Dr. George G. Harman, Huntingdon, who was operated on for appendicitis in the German Hospital, Philadelphia, March 22, has fully recovered.

Mount Alto Sanatorium.—According to State Health Commissioner Dixon, centralization of the state's tuberculosis work at Mount Alto, Cresson and Hamburg has not only great economic advantage, but also secures much better conditions for the patients under which to make the fight for health. At Mount Alto 800 patients are now being treated and the capacity will soon be raised to 1,200. One central heating plant serves for the entire village, and in the camp for incipient cases, there is a comfortably large sunshiny cottage for every eight patients, two in a room.

Touring Lecturer to be Employed.—At a meeting of the board of directors of the Pennsylvania Society for the Prevention of Tuberculosis, held May 9, it was decided to employ a lecturer to tour the state addressing the school children and teachers on the methods of preventing tuberculosis. Town meetings will be held by him and he will organize a corps of instructors to carry on the work. Plans were also formulated for an organized agitation to obtain county hospitals for advanced cases. Conferences will be arranged with the various county poor boards and a vigorous campaign started in all parts of the state.

Philadelphia

Hospital Building Dedicated.—A large addition to the Mt. Sinai Hospital was dedicated May 6, with elaborate ceremonies. A number of addresses were made and an interesting feature of the program was the sale of the golden keys (of the main door, vestibule, dispensary, various wards, private rooms and clinics) by auction, the twenty keys bringing in a total sum of $3,160.

Personal.—Dr. Warfield T. Longcope has been appointed assistant professor of medicine in Columbia University.—— The vacancy created in the editorship of the *American Journal of the Medical Sciences* by the death of Dr. Aloysius O. J. Kelly has been filled by the acceptance of the position by Dr. George Morris Piersol.——Dr. Herbert P. Leopold sailed for Europe, May 13.——Drs. George G. Ross and Albert D. Whiting have been appointed instructors in surgery at the Medical School of the University of Pennsylvania.——Dr. William M. Sweet has been appointed attending surgeon to the Wills Eye Hospital, to fill the vacancy caused by the death of Dr. Charles A. Oliver.

Urges Use of Byberry.—The Council's committee on health and charities, which made a tour of inspection of insane asylums in other cities, in its report to Councils on May 4, recommended the immediate erection of a hospital for insane at Byberry; the overcrowded condition of the present quarters and the fact that the city is paying for the maintenance of 1,930 patients in other institutions were given as reasons for prompt action. It was suggested that Councils make an appropriation for a temporary building at Byberry to house 400 of the able-bodied insane male patients, who should be put to work preparing the ground for new buildings; that the new institution be built in a semi-detached system, all buildings to be connected by corridors and tunnels; that the institution be equipped with common dining rooms, except in the infirmaries and wards for feeble and unclean cases, kitchen building, laundry, workshops, convalescent building, infirmaries, attendants' homes, recreation buildings, auditorium, chapels, power plant, surgical operating room and a morgue.

TENNESSEE

College Commencement.—The thirty-fifth annual commencement of Meharry Medical College, Nashville, was held April 25. The address to the graduating classes was delivered by Rev. C. T. Walker, Augusta, Ga. This was followed by an address from Governor Hooper. A class of fifty-five was graduated from the medical department.

Society Condemns Hospital Superintendent.—The Memphis and Shelby County Medical Society, at its meeting May 2, went on record as condemning Alvin F. Tate, superintendent of the City Hospital "on account of his personal unfitness, his discourteous treatment to members of the medical profession and his discourtesies to the interns and nurses."

TEXAS

State Association Election.—At the forty-third annual meeting of the State Medical Association of Texas, held in Amarillo, May 9-11, the following officers were elected: president, Dr. David R. Fly, Amarillo; vice-presidents, Drs. Wiley H. Freeman, Lockney; A. L. Lincecum, El Campo, and Joe H. McCracken, Mineral Wells; trustee, Dr. John T. Moore, Houston; councilors, Drs. Hugh D. Barnes, Tulia; Washington A. Harper, Austin; William H. Blythe, Mount Pleasant; Walter Shropshire, Yoakum; Wallace Ralston, Houston, and Newton J. Phenix, Colorado (reelected); delegates to the American Medical Association, Drs. Arthur C. Scott, Temple; Vard H. Hulen, Houston; William L. Brown, El Paso, and Joe Becton, Greenville, and alternates, Drs. Frank D. Boyd, Fort Worth; Charles A. Smith, Texarkana, and James C. Loggins, Ennis. Waco was selected as the next place of meeting. Resolutions were adopted setting forth the necessity for the state to promptly provide adequate room and treatment of the insane of the state so as to avoid the necessity for confinement of insane persons in jails at any time, and providing for a state commission on insanity and substituting diagnosis by the commission for trial by jury.

WISCONSIN

District Society Meeting.—At the annual meeting of the 9th Councilor District Medical Society, held in Stevens Point, May 2, Dr. Thos. H. Hay, Stevens Point, was elected president, and Dr. Potter, Marshfield, secretary and treasurer.

Higher Death-Rate.—The Wisconsin State Board of Health, in its quarterly report on vital statistics, says that the mortality rate during the first quarter of 1911 was 13.7 per 1,000 of population, an increase of 1.5 per 1,000 as compared with a similar period of last year; and that this was due chiefly to the prevalence of pneumonia.

Personal.—Dr. John A. Roberts, Portage, was operated on at the Bentley Hospital, May 7, and is reported to be doing well.——Captain James Scott, M. C. N. G. Wis., Appleton, has been ordered to attend the maneuvers at San Antonio.—— Dr. Frank E. Morley has been appointed health officer of Viroqua.——Dr. Frederick W. Bromley, Palmyra, after twenty-eight years of practice, has retired.——Dr. Gustave Bjorkman, Racine, is reported to be critically ill with gangrene of the right foot.

WYOMING

Personal.—Dr. and Mrs. Fred Horton, Newcastle, have started for a trip through the South.——Dr. Norvel H. Baker, Gillette, has been appointed house physician at the Sheridan Hospital, vice Dr. Vanatta, resigned.——Dr. Charles H. McLean, Laramie, is reported to be critically ill with pneumonia in Denver.

GENERAL NEWS

Association of American Physicians.—The Association of American Physicians, at its meeting in Atlantic City, elected Dr. J. George Adami, Montreal, president; Dr. Lewellys F. Barker, Baltimore, vice-president; Dr. George M. Kober, Washington, D. C., secretary; Dr. Solomon Solis-Cohen, Philadelphia, recorder; Dr. J. P. Crozer Griffith, Philadelphia, treasurer; Dr. Francis H. Williams, Boston, councilor; Dr. William S. Thayer, Baltimore, representative on the executive committee of the Congress of American Physicians and Surgeons, and Dr. Theodore C. Janeway, New York City, alternate.

Railway Surgeons Will Meet.—The sixteenth annual session of the Association of Southern Railway Surgeons will be held in Charlotte, May 29-31, under the presidency of Dr. William C. Day, Danville, Va. Dr. John R. Erwin, Charlotte, will deliver the address of welcome, to which Dr. J. Howell Way, Waynesville, will respond.

THE CHILD WELFARE EXHIBIT

A Presentation in New York and Chicago of Factors Influencing Childhood

The Child Welfare Exhibit, which opened in Chicago, May 11, and will continue until May 25, includes the New York Child Welfare Exhibit which was so successful in that city and is supplemented by an enormous amount of local material, which has become available for Chicago through the generosity of Mrs. Cyrus H. McCormick, Jr. Never since the conferences and exhibitions of the World's Fair in 1893 has such a general interest been emphasized in a civic or philanthropic exhibition. The exhibit was referred to editorially last week.

EXPLAINERS

The work of explaining the various features of the exhibit is in the hands of several hundred earnest workers who speak, not only English, but also all the languages used by the polyglot population of Chicago; and in addition to the explainers most of the sections are in charge of experts in the field which they cover.

DEPARTMENT OF HEALTH

The exhibit of the Department of Health, Chicago, is especially noteworthy. In one of the first booths there is a mechanical model to demonstrate how quickly the air is vitiated in a room with closed windows, and how fresh the air remains if the windows are kept open, and this is emphasized by posters and diagrams on the surrounding walls. In the Motherhood Booth the advantage of the breast-fed baby over the child who has a cow or a whole drove of cows for his foster-mother is shown and the cartoon indicates some of the chances of pollution which dairy milk runs in its journey from the farm to the city. Diagrams, charts, models and cartoons innumerable show citizens how they can use or cooperate with the city's machinery in safeguarding the health or relieving the ailments of their children, and also trace the effects of physical defects or diseases on the physical and mental development of the child. The matter of communicable diseases of children is treated in the same manner, and maps and charts show the concentration of contagious diseases. The precautions to be taken to minimize infections are set forth and a simple method of disinfecting is demonstrated. A graphic representation of the mortality of children is shown in a mechanical procession of dolls like that of the apostles in the Strasburg clock, in which every fourth doll drops from the line to illustrate that only three out of every four infants grow to maturity. Demonstrations seem to be the slogan of the department. A model demonstrates the danger of the tuberculous cow to children, and there are illustrations of the proper methods of home filtration, pasteurization and modification. The life of the fly is demonstrated and its effects as a disease carrier.

OPEN-AIR SCHOOLS

The open-air schools of Chicago have an interesting exhibit. Illinois, it is said, spends $1,187,000 every year in educating children who die of tuberculosis before they are twenty years of age, and whose lives might have been saved by transformation of the living conditions from unsanitary to sanitary by the substitution of good for poor food, and fresh for foul air. At the open-air schools there is no long confinement at desks for the pupil; there is plenty of rest, plenty of food and an abundance of fresh air. The result of the first year's work of these schools speaks for itself. The children who entered the schools were below grade and brought records of slow progress, trouble with teachers, an irregular attendance; but in the open-air school the child who had been kept from school by illness continued in school, well, and the intractable pupils became good students. An actual school completely furnished is shown in the exhibit, together with the tent used for shelter for the children in stormy weather. The work now being done in two of the public schools points the way to the work which eventually must be undertaken by the Board of Education, backed and supported by public opinion.

THE CONSERVATION OF VISION

An exceedingly interesting exhibit is that prepared under the supervision of a committee of which Dr. Thomas A. Woodruff was chairman on the conservation of vision and the wording of two of the most interesting charts of this exhibit are here reproduced:

PREVENTION OF BLINDNESS—LEGISLATION NEEDED

A law to compel physicians and midwives to report all cases of red and swollen eyes in the new born to the local boards of health within twelve hours after discovery.

A law requiring local health officers to see that all cases of ophthalmia neonatorum receive adequate treatment.

A law compelling physicians to see that cases of contagious eye diseases are surrounded with prophylactic safeguards against communication.

A law requiring adequate training of midwives and systematic registration and control.

A law compelling manufacturers to install safety appliances to prevent injuries to eyes.

A law prohibiting the indiscriminate use of fireworks.

A law requiring the proper lighting of all public buildings, particularly factories and schools.

A law preventing the manufacture of wood alcohol.

A little care at birth would have saved about 35,000 eyes.

Immediate treatment and proper care would have saved about 21,000 eyes.

Industrial precautions would have saved almost 12,000 eyes.

A sane Fourth of July would have saved over 600 eyes.

Seventy thousand eyes sacrificed through carelessness and ignorance.

Cost in money to society, about $12,000,000 every year.

Of the 89,000 blind individuals in the United States, it is said that at least one in four goes through life "in the dark" because of the ignorance or carelessness of the one who attended him in the first hour and who failed to apply a simple and harmless remedy before the infection in the eyes could begin.

The exhibit also includes the accidents to the eyes, the effects of wood alcohol and tobacco, the effects of light on the eyes—both direct and artificial—and the proper diffusion and softening of artificial light; with general directions for the lighting of rooms and industrial lighting.

The American Association for the Conservation of Vision announces as its purpose the collecting and standardization of existing in formation on all subjects pertaining to the use and care of the eyes; the securing of the investigation of subjects on which present information is incomplete or contradictory, and the promulgating of knowledge relating to the conservation of vision.

THE HEALTH ALPHABET

In the tuberculosis exhibit is a health alphabet prepared by a Chicago tuberculosis nurse, which is of sufficient value to reproduce.

HEALTH ALPHABET

A is for ADENOIDS which no child should own
B for right BREATHING to give the lungs tone
C is for COUGH which we should not neglect
D for the DENTIST who finds tooth defect
E is for EVILS of foul air and dirt
F is for FRESH AIR—too much cannot hurt
G is for GARDENS where boys and girls play
H is for HARDINESS gained in that way
I is for INFECTION from foul drinking-cups
J is for JOY in the bubbling taps
K is for KNOWLEDGE of rules of good health
L is for LUNGS whose soundness is wealth
M is for MILK, it must be quite pure
N is for NURSES, your health to insure
O is for OXYGEN, not found in a crowd
P is for PENCILS—in mouths not allowed
Q is for QUIET, which sick people need
R is for REST—as part of our creed
S is for SUNSHINE to drive germs away
T is for TOOTH BRUSH used three times a day
U is for USEFUL health rules in the school
V is the VALUE of learning these rules
W is WORRY, which always does harm
X is 'XCESS—indulge in no form
Y is for YOUTH, the time to grow strong
Z is for ZEST—help the good work along

In this exhibit is shown a tuberculosis map of Chicago, which shows that of the 3,948 children examined, 760 were suffering from pulmonary tuberculosis and 365 from tuberculosis of other portions of the body. In all, about one-third of the number examined—and these were not selected cases—were suffering from some form of the disease. There are also charts, illustrations and diagrams showing the work accomplished at the sanatoria of the Chicago Tuberculosis Association, illustrations of the outdoor sleeping porch and tent, the diet, kitchen, the milk laboratory, etc.

THE VISITING NURSES

The Visiting Nurses' Association shows its activity in child welfare work by its interesting exhibit. The association has the peculiar ambition and desire to work itself out of existence; so to improve conditions that there will be no need for its services, but, at the present time, not only has this not been accomplished, but the necessity for the use of more nurses has increased disproportionately with the supply of nurses to be obtained. An extensive series of photographs shows the work that is being done daily by the visiting nurses for the children of the poor. The nurse not only teaches the mother how to care for her child, but how properly to prepare food, and emphasizes by precept and example the necessity of cleanliness of person and surroundings.

CONFERENCES AND ENTERTAINMENTS

In addition to the exhibits daily conferences and entertainments are held in the conference room in the annex, in an adjoining church (Grace) and in the main court of the Coliseum. Demonstrations for parents, teachers and others to whom the custody of the child is entrusted form an important part of the conference programs. In a second group of conferences, experts in various lines of child service daily discuss the problems connected with their work and the direction in which an advance is most needed, such as social hygiene, the further development of juvenile court work, the better classification of children with reference to mental and physical defects, better cooperation between parents and teachers, the treatment of dependent, truant and delinquent children, and the better organization of recreational facilities. The third group of conferences is addressed by those who can

XUM

best interpret the claims of child-life and child-care to the interest, support and service of the whole city. On the main floor of the Coliseum daily entertainments of various kinds, as musical, athletic, apparatus work, plays, etc., are given daily by children of all ages. The results of such an exhibit must be far-reaching and will make for a better and healthier childhood.

FOREIGN NEWS

International Sanitary Conference.—The United States Department of State has been recently advised by the French government that the International Sanitary Conference called by that government to meet in Paris May 26, has been postponed until Oct. 10, 1911. The object of this conference is stated in the invitation to be to revise, to amend and, should the occasion arise, to complete the Sanitary Convention of Dec. 3, 1903, as to the measures to be applied by the powers participating in the conference to control the spread of plague, cholera and yellow fever. It is probable that among the amendments which will be adopted at this conference will be additional articles relating to yellow fever, closely corresponding with those adopted by the Second General International Sanitary Convention of the American Republics, Washington, Oct. 14, 1905. The representatives on the part of the United States who have been designated to attend this conference are Lt. Colonel J. R. Kean, Medical Corps, U. S. Army; Surgeon J. C. Pryor, U. S. Navy, and Surgeon Henry D. Geddings, U. S. Public Health and Marine-Hospital Service.

CANADA

McGill Alumni Reunion.—There will be a reunion of the graduates of the medical department of McGill University, Montreal, in that city June 5-6, just before the meeting of the Canadian Medical Association.

Academy Meeting.—The fourth annual meeting of the Toronto Academy of Medicine and the first to be held in its new home in Queen's Park, was held May 3, and the following fellows were elected to office: President, Dr. Newton A. Powell; vice-president, Dr. Richard A. Reeve; past president, Dr. Albert A. Macdonald; honorary secretary, Dr. W. Harley Smith; honorary treasurer, Dr. William A. Young; and chairman of sections-medicine, Dr. Graham Chambers; surgery, Dr. Herbert A. Bruce; pediatrics, Dr. John T. Fotheringham; pathology, Dr. John J. McKenzie; ophthalmology, Dr. Charles Trow, and state medicine, Dr. John S. McCullough.

Personal.—Dr. J. L. Todd, St. Anne, Que., of McGill University, has started for West Africa to study sleeping-sickness. ——About fifty members of the staff of Toronto General Hospital attended a banquet in Toronto, April 9, in honor of Dr. John Nelson Elliott Brown, the retiring general superintendent. A handsome silver salver was presented to Dr. Brown and an illuminated address was read and presented by Dr. David J. G. Wishart.——Dr. Henry Raymond Casgrain, Windsor, has been elected chairman of the liquor license commission for that district.——The council of the Royal Geographical Society of England has awarded to Dr. Wilfred T. Grenfell, St. Anthony, Labrador, the Murchison bequest for the current year in recognition of his contribution to the geographical knowledge of the world.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, May 6, 1911.

A Committee of the British Medical Association for the Investigation of the Treatment of Fractures

About twenty years ago, "collective investigation" was employed by the British Medical Association for the investigation of disease. This consisted in issuing to physicians blanks on some question in need of investigation. These when filled in and returned were handed over to some authority on the subject for collation, and the results were published in the *British Medical Journal*. The project was started with high hopes; it was thought that the collected experiences of many men would do much to advance medical science and furnish results where individual experience had failed. But in spite of a large amount of work, freely and unsparingly done both by physicians and by eminent authorities who collated the observations, the tangible results were insignificant and it is impossible to point to a single discovery of even minor importance made by this method. Even the very term "collective investigation" has fallen out of use. Such a result might have been anticipated. Observations have weight as well as number, and require skill and experience. Where skilled investigators have failed a host of observers not selected for any special aptitude cannot be expected to succeed. All the discoveries of medicine, whether great or small, have been made by individuals working alone or with a few collaborators selected for the purpose. The Hippocratic maxim as to the difficulty of experience has especial application to investigations carried out by many observers. However, the method has been revived by the association. In consequence of a recommendation made by the section of surgery at the last annual meeting on the conclusion of the discussion on the operative treatment of simple fracture, the council has appointed a committee to inquire into the ultimate results obtained in the treatment of simple fractures with, or without, operation. A notice has been published in the *British Medical Journal* requesting the cooperation of surgeons, surgical registrars of hospitals and other practitioners who may be in a position to assist the inquiry to let the committee have access to records of suitable cases. The investigations will be limited to simple fractures of the long bones which have occurred in the five years 1906-1910.

Destruction of Fleas by Exposure to the Sun

In India the prevalence of plague renders the destruction of fleas a serious problem. For the destruction of these pests in travelers' baggage various powders have been tried. Naphthalin acted well, but was too slow, requiring six and one-half hours to kill fleas in a closed space and nine hours in the open. It was then determined to ascertain the effect of the heat of the sun. The results are given in a very instructive "Memoir of the Medical and Sanitary Departments of the Government of India," by Capt. J. Cunningham, an army surgeon. In previous experiments it had been found that rags spread on the ground in thin layers were freed from fleas in three hours. In the present investigation the attempt was made to determine the different ways in which fleas behave when clothes are spread on different kinds of ground. Tin trays 4 by 4½ feet, with sides 4 inches high were made. In these were placed cotton carpets (*dhurries*) and a hundred fleas were introduced, half above and half below the carpet. The tray was drawn out into the sun and the behavior of the fleas carefully watched. They were seen to escape from the glare, but after seven minutes all on the surface were killed, and at the end of half an hour also all those beneath the carpet. When carpets were spread on sand the effects were more marked, the sand absorbing the sun's heat faster than the trays. The fleas made no attempt to burrow into the sand and were almost immediately killed. When the carpets were spread on leaves and grass the fleas dived under the grass and got protection from the sun. With carpets spread on hard ground the time necessary for the destruction of all fleas was forty-five minutes; on sand, somewhat less, the temperature being 117 F. under and 118-142 F. on the surface of the carpets. Experiments were also made with the padded cotton quilts, used by the natives, to see if they protected fleas from the sun's heat. In one or two cases the heat did not penetrate the whole thickness of the quilt and some fleas survived, but on turning the quilt over no fleas were found alive after an hour's exposure to the sun; the temperature inside the quilt was found to be 143 F. The following rules have therefore been drawn up for the disinfection of flea-infested clothing by a means which is simple, reliable, and free from expense. The ground must be fully exposed to the sun and devoid of anything that can shelter the fleas, and should be covered with a 3-inch layer of fine sand. The surface temperature of the sand must be at least 120 F. before the clothing is spread. The clothes must be spread evenly in a single layer for one hour, padded articles being turned once or twice. No clothes must be placed within three feet of the edge of the sand (to prevent the fleas from traveling away). The whole area should be fenced in to keep off animals.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, May 5, 1911.

The Sense of Direction Among the Blind

During one of the last sessions of the Académie des Sciences, M. Truschel, of Strasburg, read a communication on the sense of direction in the blind. It is known that the blind find their way very easily and that they seem to avoid obstacles as if they had a special sense. Some authors, to explain these phenomena, have assumed a new sense, sometimes called "the sixth sense of the blind." It has even been maintained that obstacles are felt by means of unknown emanations. It appears, from experiments undertaken by M. Truschel, that the blind have actually the ability to perceive obstacles at some distance, but it is not a sixth sense, the sensation being due

exclusively to reflection of sound and not being peculiar to the blind exclusively. For instance, when the ground is covered with snow or the floor with a carpet, the blind find the greatest difficulty in orienting themselves. Therefore, they are able to perceive obstacles brought close to them very slowly and silently, only when there is absolute silence in the room. When the head of the blind person is enveloped with paper, cloth, etc., however, the perception persists. Only a large cylinder surrounding the head can suppress the sensation, because it produces the same effect as the approaching object. M. Truschel believes that the organ of these perceptions is the labyrinth, and that the sense of direction which is so highly developed among certain animals may be explained in the same way.

Monument to Dr. Mesny

A committee has been formed to erect a monument to Dr. Gérald Mesny, who died a victim of his devotion at Foudzadian (THE JOURNAL, March 18, 1911, p. 826). M. Berteaux, minister of war, has accepted the honorary presidency of the committee. A subscription will be opened at Tien-Tsin, among the residents and the French physicians, the mandarins and the Chinese students of the school of medicine, of which Dr. Mesny was professor.

The Training of Dogs for the Sanitary Service

In a previous letter I mentioned encouraging results obtained in the experimental employment of dogs for the search of the wounded (THE JOURNAL, Sept. 17, 1910, p. 1036). The ministry of war has just created at Fontainebleau, near Paris, military kennels for the breeding and training of the sanitary service dog.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, April 27, 1911.

Benzoic Acid and Its Salts as Food Preservatives

The official board of experts (*Wissenschaftliche Deputation für das Medizinalwesen in Preussen*) has presented a report to the Prussian ministry regarding the permissibility of the use of benzoic acid and its salts for the preservation of foods. In this report the investigations made by the United States Department of Agriculture are referred to, by which it was shown that benzoic acid produces poisonous effects only in relatively large doses. The board, however, believes it cannot be said with certainty at present that larger doses (to the amount of several grams) will be permanently so harmless to all human beings as the smaller amounts. The experiments of the American scientists were of too short duration and the results subject to such limitations that they cannot be regarded as convincing proofs of the unconditional harmlessness of the acid. Taking into consideration food legislation in other countries, the board comes to the conclusion that the use of benzoic acid and benzoates for the preservation of foods should not be permitted. The danger of harm is most marked with children and weak or sick individuals. A further objection is raised against chemical food preservatives in general, namely, that by their use the care necessary to prevent food from putrefying or molding will be neglected by manufacturers and dealers.

Personal

Professor Moritz of Strasburg has accepted the call as director of the medical clinic of the academy for practical medicine in Cologne.

Professor Leube of Würzburg contemplates resignation from his teaching position at the end of the summer semester on account of his advanced age.

Professor Manz, the ophthalmologist of Freiburg, died April 21, at the age of 78 years. He joined the faculty in 1859 and became director of the eye clinic in 1868. His chief works dealt with the development, malformations and tuberculosis of the eye and with optic neuritis. He retired from active work in 1901.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, May 1, 1911.

Responsibility of Physicians and Medical Institutes

The problem of medical responsibility has commanded the attention of physicians in a high degree for the last few years, owing to recent lawsuits which have taken place in this country. Especially *x*-ray workers have lately been victims of such actions, and although in all the recent cases the claims have been dismissed, nevertheless the worry and trouble incurred by the doctors were very telling. Surgeons and obstetricians have lately had to fight out such claims, and in one instance a rhinologist was accused of having disfigured a man whose nose assumed a shape not expected by the patient before he submitted to a plastic operation of this organ. Also hospitals have been sued for damages by patients and in one instance the junior house surgeon, who actually was so unfortunate as to be guilty of malpractice, had to pay heavy damages. The consequence of it was that the members of all the hospital staffs refused to work in the government hospitals unless they were insured against liabilities arising out of such occurrences. A special insurance company has been established by physicians for physicians, whose chief object is to protect the profession against such claims. The medical associations have repeatedly admonished their members to be careful in such instances, and that all medical colleagues should be defended against unjust attacks. Furthermore, all hospitals have been warned against operating on a patient without the written consent of the patient, or, in case he be a minor or not fit to judge for himself, without the consent of his responsible friends. Great stress is laid on the qualities of the anesthetist in operations. In this country he must be a duly qualified M.D. Perhaps to these stringent precautions we owe the relative scarcity of deaths under an anesthetic, otherwise a fruitful source of claims for compensation by the relatives. At present nearly all physicians practicing surgery of any kind in this country, and all hospital physicians also, belong to one or another of the insurance companies. The rate of premiums is 25 kronen ($5) for insurance up to the sum of 20,000 kronen ($4,000), with an additional 10 kronen for each further 10,000 kronen insured. The hospitals are insured, not per person especially named, but per number of doctors employed. The medical councils are at present engaged in statistical research of the points in question: the actual damage done to a patient, whether moral or material, and the actual error on the part of the physician or the nurse or other person employed by the physician, as well as the sums claimed for damages and the sums awarded them in court.

Schools for Crippled Children

A number of children have been placed in special institutions lately in this city with an object of studying the possibility of schools for cripples. The idea is to help those children who are defective in one or more organs, excluding the blind, deaf and mute. The experimental classes consist of forty-three boys, of whom thirteen have lost the normal use of the right arm; seven have lost the right, nine the left eye; fourteen are hunchbacks, while nearly all of the latter show also pathologic changes in the extremities. The children are taught as far as possible on equal lines with normal children of the corresponding age, but with special attention to the individual defect. As far as the results obtained already can be judged, teaching begun early will make the child as useful a citizen as any other person. Great stress is laid on teaching of such subjects as will be of use in future in helping the cripple to earn a living.

Marriages

LUCIUS C. BUCKLEY, M.D., New York City, to Miss Edna Bruner of Sacramento, Cal., at Petchaburi, Siam, March 20.

JAMES GILBERT HOWARD, M.D., Ozone Park, L. I., to Miss Mabel E. Clarke of Brooklyn, at Newark, N. J., May 11.

RENA MAY HEILMAN, M.D., Leechburg, Pa., and Alexander Pitcairn Lindsay of Pittsburg, at Leechburg, April 12.

GEORGE ANDREW CATHEY, M.D., Portland, Ore., to Miss Bertha Anne Kruse of North Bend, Ore., April 28.

CHARLES M. STEELE, M.D., Reno, Nev., to Mrs. Mylo Egan of New York City, in San Francisco, April 28.

SAMUEL E. GROUT, M.D., Birmingham, Ala., to Miss Mary Stewart Wells of Dyersburg, Tenn., May 18.

FREDERICK R. WILLIAMS, M.D., Bisbee, Ariz., to Miss Elizabeth A. Taft of Houston, Tex., April 26.

JAMES ALEXANDER LOGAN, M.D., Colona, Ill., to Miss Clara Rimbey of Murrayville, Ill., April 24.

THOMAS J. LYNCH, M.D., St. Joseph, Mo., to Miss Clare O'Connor of Buffalo, N. Y., May 1.

WILLIAM WESLEY PETER, M.D., Toledo, to ELEANOR E. WHIPPLE, M.D., of Chicago, May 4

LONNIE L. LANIER, M.D., Stillmore, Ga., to Miss Marguerite Harper, at Stillmore, May 7.

ROCCO ANDREW MONTANI, M.D. to Miss Eustasia Morone, both of Indianapolis, May 3.

CARL H. MEYER, JR., M.D., to Miss Johanna N. Jurgensen, both of Baltimore, April 25.

EDWARD L. HEINTZ, M.D., to Miss Bertha Marie Hansen, both of Chicago, May 4.

CHARLES EDWARD SIDWELL, M.D., to Miss Ruth Edna Allen, both of Chicago, May 11.

EMIL GEIST, M.D., Minneapolis, to Miss Augusta Ohage of St. Paul, May 9.

MANNEY RICE, M.D., to Miss Mabel Smith, both of Columbia, S. C., April 30.

Deaths

Roscoe H. Ritter, M.D. Medical College of Indiana, Indianapolis, 1897; a member of the Indiana State Medical Association; secretary of the Indianapolis Medical Society; pathologist to the Indianapolis City Hospital; professor of pathology in the Indiana Medical College, and chairman of the college curriculum committee; professor of materia medica and therapeutics in the Indiana Dental College; died at his home, May 6, from nephritis, aged 37. The Indianapolis Medical Society and the faculty of the Indiana University of Medicine, at special meetings held May 6, adopted resolutions regarding the death of Dr. Ritter.

William A. Duncan, M.D. Chattanooga (Tenn.) Medical College, 1898; a member of the American Medical Association, and Association of Southern Railway Surgeons; president of the Chattanooga Academy of Medicine and Hamilton County Medical Society in 1910; for one term city physician of Chattanooga, and a member of the staff of the Erlanger Hospital; local surgeon for many of the railways centering in Chattanooga; died at the home of his parents in that city, May 4, from tuberculosis, aged 35.

William Samuel Smith, M.D. University of Southern California, Los Angeles, 1902; for two years assistant surgeon at the Los Angeles County Hospital and then a practitioner of Arizona for three years; a member of the territorial board of examiners of the insane; physician of Yavapai County and superintendent of the county hospital; died at his home in Santa Monica, Cal., February 19, aged 32.

Jasper Tidball, M.D. University of Michigan, Ann Arbor, 1874; Bellevue Hospital Medical College, 1878; a member of the American Medical Association; local surgeon at Grafton, Ill., for the Chicago, Peoria and St. Louis Railway; who gave up practice about two years ago and went to San Diego, Cal.; died at his home in that place, April 25, from pernicious anemia, aged 62.

Thomas C. Longino, M.D. Southern Medical College, Atlanta, Ga., 1895; a member of the Medical Association of Georgia; captain and assistant surgeon of volunteers during the Spanish American War, and thereafter for a time a practitioner of Galveston, Tex.; died at his home in Atlanta, April 28, aged 37.

George Washington Talson, M.D. New York University, New York City, 1860; for several years a member of the staff of St. Francis Hospital, Jersey City, and physician to the Little Sisters of the Poor; died at the home of his sister in Wheeling, W. Va., April 19, from heart disease, aged 70.

Samuel Eccleston Holtzman, M.D. New York University, New York City, 1862; assistant surgeon and surgeon of the Fifty-Eighth Indiana Volunteer Infantry during the Civil War; formerly of Pontiac, Ill., but of late years a resident of Takoma Park, D. C.; was found dead at his summer home in Ocean Grove, N. J., May 8, from heart disease, aged 73.

Charles Magnus Brucker, M.D. Eclectic Medical Institute, Cincinnati, 1882; for one term mayor of Tell City, Ind., and for two terms a member of the common council; president of the local medical board; a member of the local pension board and local surgeon to the Southern Railway; died at his home, May 9, aged 51.

Madison Waldo Leonard, M.D. University of Alabama, Mobile, 1894; of Attala, Ala.; a member of the Medical Association of the State of Alabama; died in that place, April 30, from the effects of a gunshot wound of the head, believed to have been self-inflicted with suicidal intent while despondent, aged 45.

James Huntington Bailey, M.D. University of Vermont, Burlington, 1857; the oldest practitioner of Ticonderoga, N. Y.; surgeon of the Eighth Vermont Volunteer Infantry during the Civil War; died at his home, April 13, from the effects of a fracture of the hip, due to a fall seven months before, aged 77.

John B. Trowbridge, M.D. Rush Medical College, 1882; a member of the American Medical Association; local surgeon at Haywood, Wis., for the Chicago, Milwaukee and St. Paul Railway, and a member of the local board of United States pension examining surgeons; died at his home, in April, aged 60.

William Alfred Trueblood, M.D. University of Alabama, Mobile, 1902; Washington University, St. Louis, 1903; a member of the American Medical Association; formerly of Ottumwa, Ia., and a member of the staff of the Ottumwa Hospital; died in Baker City, Ore., May 1, from pneumonia, aged 37.

James M. Louther, M.D. Philadelphia University of Medicine and Surgery, 1865; one of the oldest practitioners of Somerset County, Pa.; for many years a practitioner of Stoyestown; at one time a member of the State Board of Medical Examiners; died at his home in Somerset, April 25, aged 72.

George W. Hafele, M.D. University of Maryland, Baltimore, 1908; of Baltimore; died at the home of his sister in that city, May 3, from the effects of a gunshot wound of the head, believed to have been self-inflicted with suicidal intent while despondent from over-study, aged 32.

Emanuel T. Rehrig, M.D. Medico-Chirurgical College of Philadelphia, 1907; a member of the American Medical Association; for four years resident physician at the Whitehaven (Pa.) Sanatorium for Tuberculosis; died at the home of his parents in Easton, Pa., April 28, aged 28.

Augustus Alexander Clewell, M.D. University of Louisville, Ky., 1871; a member of the American Medical Association; a Confederate veteran; for thirty years a practitioner of Baltimore; died at his home in that city, April 28, from angina pectoris, aged 65.

Benjamin Kinyon, M.D. University of Michigan, Ann Arbor, 1871; for many years a practitioner of Cincinnatus, Ill.; for eight years a member of the Board of Supervisors; died at the home of his daughter in Wilmette, Ill., April 12, aged 68.

Henry Kunkel, M.D. College of Physicians and Surgeons, Baltimore, 1889; a member of the American Medical Association and American Academy of Medicine; died at his home in Kingston, Pa., April 26, from chronic bronchitis, aged 49.

Henry Jay Brink, M.D. New York University, New York City, 1883; physician of Britt, and Hancock County, Iowa; was found dead in a livery barn in Britt, May 8, after returning from a professional call, from heart disease, aged 51.

Benjamin S. Shaug (license, Iowa, years of practice 1886); a veteran of the Mexican War, and a surgeon throughout the Civil War; for twenty years a practitioner of Eldon, Ia.; died in Ottumwa, April 28, from cerebral hemorrhage, aged 84.

Thomas Callaghan, M.D. Baltimore (Md.) Medical College, 1900; of Smith's Hill, Providence, R. I.; a specialist in obstetrics and diseases of children; died at the East Side Hospital, Providence, May 5, from cerebral hemorrhage, aged 39.

Alexander J. Rogers (license, Westmoreland County, Pa., twenty years of practice, 1881); a veteran of the Civil War; for many years a practitioner of Scottdale; died at the Rogers homestead in Connellsville, April 28, aged 76.

Marquis Greenwald (license, Indiana, 1897); a pioneer practitioner of Auburn, where he had practiced twenty years; died at the home of his daughter in Auburn Junction, April 25, from cerebral hemorrhage, aged 76.

Harry H. Baker, M.D. Chicago Homeopathic Medical College, 1897; of Chicago; for several years a lecturer on materia medica at Hahnemann Medical College; died in Brooklyn, May 13, from heart disease, aged 45.

Emory E. Howard, M.D. University of Vermont, Burlington, 1884; formerly of South Hadley, Mass.; secretary and treasurer of the Florida Open Air Association; died at his home in Sorrento, May 1, aged 60.

Perdelete Hebert, M.D. Bellevue Hospital Medical College, 1898; a member of the American Medical Association; died at his home in Iron Mountain, Mich., April 26, from carcinoma of the stomach, aged 53.

Henry Garrettson Spooner, M.D. Harvard Medical School, 1897; formerly of Boston; first editor of the *American Journal of Urology*; died in the Massachusetts General Hospital, Boston, May 3, aged 39.

John S. Renninger, M.D. Hahnemann Medical College, Chicago, 1881; formerly a member of the Minnesota State Medical Association; died at his home in Marshall, Minn., last month, aged 54.

Selden LaFayette Blake, M.D. California Eclectic Medical College, Los Angeles, 1880; of San Francisco; died in the Irving Sanatorium in that city, April 28, from cerebral meningitis, aged 54.

Henry Rossignol, M.D. Medical College of Georgia, Augusta, 1848; surgeon in the Confederate service throughout the Civil War; died at the home of his daughter in Atlanta, Ga., April 25, aged 85.

Andrew F. Hammer, M.D. Hahnemann Medical College, Chicago, 1878; a member of the Illinois State Medical Society; died at his home in Taylorville, May 1, from nephritis, aged 61.

Charles A. Walters, M.D. New York Homeopathic Medical College, New York City, 1878; died suddenly at his home in Brooklyn, May 2, from cerebral hemorrhage, aged 57.

Dyas C. Ellis (license, Missouri, 1883); for fifty years a practitioner of Missouri; a veteran of the Civil War; died at his home in Garden City, April 21, aged 78.

Emmett Eugene Horn, M.D. College of Physicians and Surgeons, Chicago, 1906; died at his home in Englewood, Colo., March 14, from tuberculosis, aged 29.

William L. Stephens, M.D. Eclectic Medical Institute, Cincinnati, 1901; formerly of Lenapah, Okla.; died at his home in Idaho, April 1, aged 52.

T. M. Morton (registration, Oklahoma, act of 1908); for many years a practitioner of El Paso, Ark.; died at his home in Davis, Ark., April 30.

Leonard Von Stein (license, Ohio, years of practice, 1896); of Upper Sandusky, O.; died in the Wyandot County Infirmary, April 25, aged 81.

William H. Kindleberger, M.D. Indiana Medical College, Indianapolis, 1875; died at his home in Indianapolis, May 2, from neuritis, aged 54.

William H. Yarnall, M.D. Eclectic Medical Institute, Cincinnati, 1865; died at his home in Detroit, May 6, from pneumonia, aged 68.

Jonathan Edward Burford, M.D. Jefferson Medical College, 1879; of Patterson, Tex.; died in San Antonio, April 27, aged 55.

George W. Harmon, M.D. Hahnemann Medical College, Philadelphia, 1884; of Newark, N. J.; died in Mena, Ark., April 21.

William Anderson, M.D. Victoria College, Coburg (Ont.) 1858; died recently at his home in Newcastle, Ont., aged 74.

Adolphus T. Keckler, M.D. Physio-Medical College, Cincinnati, 1866; died at his home in Cincinnati, April 22, aged 80.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

TUCKER'S ASTHMA SPECIFIC

An Insidiously Dangerous Cocain Mixture

This nostrum is sold by a Dr. Nathan Tucker of Mount Gilead, O., and is applied locally by means of an atomizer. When written to, Dr. Tucker sends a form letter with circulars describing his "system" for the cure of "asthma, hay fever and nasal catarrh." The "treatment," for which $12.50 is asked, consists of an atomizer and 4 cunces of the "cure." This nostrum has been analyzed repeatedly and in almost every case, so far as we know, cocain has been found in it.

In 1903, Aufrecht examined the stuff and assigned to it the following composition:

Cocain hydrochlorid	1 per cent.
Potassium nitrate	5 per cent.
Glycerin	35 per cent.
Bitter almond water	35 per cent.
Water	25 per cent.
Vegetable extractives (probably from stramonium)	4 per cent.

In common with nostrums of all kinds, its composition seems to change with the whim of the manufacturer, for when Bertram analyzed the preparation in 1905, he reported finding:

Atropin sulphate	1 per cent.
Sodium nitrate	4 per cent.
Vegetable extractives, dissolved in water with some glycerin	0.52 per cent.

Still later O. Anselmino (*Pharmaceutische Centralhalle*, Dec. 6, 1906) reported that one of his analyses disclosed the presence of hydrocyanic (prussic) acid, but that the analyses of another sample did not show the presence of this drug. He also reported finding a nitrite in the first sample examined but no potassium nitrate. The amount of alkaloid found by Anselmino was 1 per cent., the greater part of which was cocain.

In THE JOURNAL, August 4, 1906, Dr. Herman Vickery of Boston, reported that he had had analyses made of this preparation and that 7 grains of cocain hydrochlorid had been found in each ounce of the remedy. In THE JOURNAL, August 28, 1906, Dr. N. P. McGay of Shiloh, O., reported a case of cocain poisoning in a 5-year old child from the use of Tucker's preparation.

The Massachusetts State Board of Health, in its official bulletin for January, 1907, listed Tucker's Asthma Specific among other cocain-containing preparations which are unsalable in that state.

The London *Lancet*, Feb. 29, 1908, reported a case of poisoning following the use of this preparation. The victim was a married woman, age 36, who had been suffering for some time from asthma. The physician who was called just before her death discovered symptoms of cocain poisoning and refused to give a certificate of death. At the inquest it was shown that she had been taking the Tucker preparation for about two years. In the same issue, the *Lancet* stated that the British agent for this nostrum had been prosecuted under the Pharmacy Act for selling a product containing certain poisons (cocain and atropin) without labeling the preparation "poison." Analysis of the asthma cure at that time was said to have shown the presence of 3.6 grains of cocain and 0.91 grain of atropin to the ounce.

In 1910, the United States Department of Agriculture issued "Farmers' Bulletin 393," a twenty-page pamphlet entitled, "Habit-Forming Agents," by Dr. L. F. Kebler, Chief of the Division of Drugs of the Bureau of Chemistry. In this pamphlet the public was warned against using the various nostrums containing habit-forming drugs. Under "Asthma Remedies" the following statement appears regarding Tucker's "cure":

> "An example of the cocain type is 'Tucker's Asthma Specific,' which consists of a solution of cocain and is sold throughout the United States as a result of extensive advertising and personal recommendation. The 'Asthma Specific' consists of a bottle of medicine containing cocain to be used as a spray with an atomizer. The price of the latter is $12.50. Recent investigations showed that the amount of cocain purchased by the promoter of this remedy from a single manufacturing house during four months varied between 256 and 384 ounces a month."

In March, 1911, a physician sent to the Association's laboratory a sample of this nostrum. Analysis indicated once more that cocain was present.

When one considers the prevalence of the cocain habit and the demoralizing and brutalizing effect that this habit has on its victims, the viciousness of the indiscriminate sale of a preparation of this sort becomes evident. While the excuse is made by the exploiter of this dangerous nostrum that the amount of cocain that it contains is very small, every physician knows that the application of drugs to the nasal mucous membrane will produce constitutional effects in quantities that would be considered negligible if administered by mouth. It is only necessary to call attention to those cocain

habitués, known as "coke-sniffers," to realize the enormous harm that can be done by the taking of cocain in this way. Under the existing federal law, it is impossible to reach the men who engage in this cocain dispensing traffic, unless they make misstatements on the label. It is high time, then, that the various states enact such laws as will make the promiscuous distribution of cocain a penal offense. When this has been done, Nathan Tucker may perforce engage in a business that will be more respectable, if less profitable, than his present occupation.

MAGIC FOOT DRAFTS

An International Rheumatism Cure Fake

This widely advertised humbug is sold as a cure for rheumatism. It emanates from Jackson, Mich., a town that has the unenviable distinction of being the home of a large number of international medical fakes.

F. G. Badgley, is said to be not only president of this company, but also secretary and treasurer of the J. Lawrence Hill consumption cure fraud[1] and president of the Van Vleck pile cure concern; Badgley is also a lawyer. Whether his interest in law is greater than his interest in quackery, we do not know.

H. H. Mallory, is said to be vice-president of the Magic Foot Draft Company, ex-vice-president of the Hill consumption cure fake and vice-president of the Van Vleck pile cure. Mr. Mallory is also an advertising agent.

R. A. Oliver, whose name still appears in connection with the advertisements of this fake, is said to be no longer living although it is understood that his estate still has an interest in the Magic Foot Draft Company. In common with others of the group, Oliver when living was connected with the Hill consumption cure and the Van Vleck pile cure.

The Magic Foot Draft Company is said to have a somewhat extensive printing plant. This may explain the typographic sameness of much of the advertising sent out by the Hill, the Van Vleck and the Magic Foot Draft concerns.

The foot drafts consist of plasters to be applied to the soles of the feet. The plaster mass is in the central portion of the unfinished side of a sort of oilcloth, the margin of which is coated with an adhesive mixture. The ingredients of the plaster mass were investigated by Dr. L. F. Kebler of the Bureau of Chemistry and the results published some time ago[2] in THE JOURNAL. Dr. Kebler reported that the composition of the plaster was:

Poke root	30 per cent.
Pine tar	62 per cent.
Cornmeal	8 per cent.

Dr. Kebler reached the following conclusion regarding the value of the Magic Foot Draft: "They possess no curative element whatever, which when absorbed into the blood will neutralize the poisons which are supposed to be the cause of the rheumatism and in this manner effect a cure."

At the same time, Dr. Kebler also called attention to the fact that the Magic Foot Draft Co. sent out pills of methylene-blue under the name, "Magic Regulators." The value of the Magic Regulators was thus described by the company:

"To prove the action of our Magic Regulators on the kidney, the organs which in rheumatism are always diseased and fail to do their work, allowing the poisonous acids to accumulate and lay the foundation for a long and painful run of rheumatism, watch the color of the urine, voided. If it assumes a light blue or bluish green color you may rest assured that the Magic Regulators are doing their work."

As the urine of every healthy person always "assumes a light blue or bluish-green color," when methylene blue is administered, it is needless to say that the "Regulators" usually did their work!

The Magic Foot Draft concern advertises heavily in Great Britain and for this reason the British Medical Association recently analyzed the plaster mass of the foot drafts. Their chemist reported:

"The plaster itself weighed about 80 grains and was found to be a mixture of Stockholm tar and the powdered rhizome of white hellebore; determination of their proportions showed the formula to be approximately:

"Powdered white helebore (veratrum viride)..40 per cent.
"Stockholm tar .....60 per cent.

"No other ingredients could be detected. Estimated cost of ingredients for one pair, 1/6 of a penny." (1/3 of a cent.) Selling price, $1.00!

The difference in the findings of the British and American chemists bears out what has been stated many times, namely, that the composition of nostrums can never be relied on. From what has been said, it is evident that Mr. Adams, in his Great American Fraud series, characterized the Magic Foot Drafts correctly when he said: "Affixed to the soles of the feet they are advertised as drawing out the rheumatic poison from the whole system. Of course they might as well be affixed to the barn door, so far as any uric acid extraction is concerned."

1. The exposés of this and similar frauds have been reprinted in the pamphlet "Consumption-Cure Fakes," price 6 cents.
2. Kebler, L. F.: Nostrums and Fraudulent Methods of Exploitation, THE JOURNAL A. M. A., Nov. 10 and 17, 1906.

Correspondence

The Round-Ligament Operation

To the Editor:—I have read with much interest the letters of Dr. J. Clarence Webster, of Chicago, and Dr. J. M. Baldy, of Philadelphia, in THE JOURNAL, A. M. A., April 29, p. 1280, regarding the origin of the so-called Webster or Baldy operation for suspension of the uterus by posterior suture of the round ligaments. This argument is most amusing to one familiar with certain facts, which, with your kind permission, I shall endeavor to set forth herein.

In 1900 and 1901 I held the chair of anatomy and operative surgery in the Post-Graduate Medical School of Chicago. Sometime in the year 1900, Dr. Frank Andrews, of Chicago, told me of an operation for suspension of the uterus that he had then been using for more than ten years. Dr. Andrews' operation consisted of drawing the round ligaments backward through the broad ligaments beneath the Fallopian tubes, and suturing them to each other and to the posterior surface of the uterus, thus suspending the uterus in a sling.

This operation appealed to me, and I taught it to my classes in gynecology, on the cadaver, and in my lectures at the Chicago Post-Graduate Medical School, calling it the Andrews operation. My first opportunity to try this operation on the living individual came in June, 1901. The patient, Mrs. C. M., entered Chicago Hospital (record number 2,584), and was operated on June 18, 1901. Through a median abdominal incision the uterus and appendages were freed from adhesions; the diseased right ovary and tube were removed; an intraligamentous cyst was enucleated from the left broad ligament, and the uterus was suspended by bringing the round ligaments together behind the uterus and suturing them to each other and to the posterior uterine wall. This patient recovered with the usual pain following this procedure, but with the uterus in good position.

I did this operation next on Mrs. E. M., at the Chicago Post-Graduate Hospital, Aug. 13, 1901. My case record shows that I amputated the cervix, curetted, made a median abdominal incision, resected one-quarter of the left ovary, removed the degenerated right ovary, and a right hydrosalpinx, and suspended the uterus by passing both round ligaments through the broad ligaments and suturing them to each other and to the posterior wall of the uterus.

The next patient on whom I performed this operation was Mrs. M. H., sent into Chicago Hospital by Dr. R. C. Cupler, of Chicago. The record number was 2,696; she was operated on Sept. 8, 1901. I was assisted by Drs. R. C. Cupler and Roy M. Wheeler; the anesthetic was administered by Dr. J. G. Chichester. A typical Andrews operation was done, both round ligaments being drawn backward through the broad ligaments and sutured together and to the posterior uterine wall.

While this patient was still in the hospital, Dr. J. Clarence Webster sent a patient into the Chicago Hospital and did a ventral suspension.

The house surgeon, Dr. J. G. Chichester, took the liberty of talking to Dr. J. Clarence Webster about the Andrews operation on the round ligaments that I had done a few days before.

A few weeks later, viz., Oct. 5, 1901, there appeared in THE JOURNAL A. M. A., an article by Dr. J. Clarence Webster descriptive of his new suggestion for uterine suspension, illustrated with very crude drawings. In this paper technic only was discussed, no cases being reported.

I have no comment to make on this coincidence. Frequently like operations are conceived by different men—often by men residing in different localities.

I have no doubt that Dr. Webster, having independently conceived the operation, naturally desired to be the first to publish a description of it.

I do desire to state, however, that Dr. Frank Andrews, of Chicago, is the real pioneer in round ligament suspension and should be so accredited.

RAYMOND C. TURCK, Jacksonville, Fla.

To the Editor:—A good way to settle the Baldy-Webster priority controversy, in my humble opinion, would be for the disputants to shake hands and agree that they have discovered something that wasn't worth finding.

Their operation practically sacrifices the inner strong ends of the round ligament, and puts all the weight and strain on the outer attenuated and weakened ends of the ligament. Their operation has no advantage over Alexander's or one of its modifications in uncomplicated cases, and certainly is not so good as Montgomery's or the old ventral suspension in those cases requiring laparotomy—ventral suspension to be used in postclimacteric cases only of course.

The Baldy-Webster proposition's greatest weakness is the fact that it does not raise the uterus up unless the broad ligament is perforated low enough down to invite postoperative flexion. It simply draws the organ forward and in that respect is not so effective as Alexander's operation.

Let Drs. Baldy and Webster "bury the hatchet" and compromise on the Montgomery modification of Gilliam's operation for retrodeviations demanding surgery, and devote themselves to solving some of the real problems in pelvic diseases.

C. F. ENGLISH, M.D., Sonora, Cal.

Lectures on Sex Hygiene

To the Editor:—It seems to have been agreed by the various societies of social hygiene in this country that, for the present at least, the best results in the campaign against the social evil can be attained by educating the public, along sanitary rather than moral lines, in matters of sex hygiene. A recent article by W. D. Parkinson in the *Educational Review*, which was commented on editorially by THE JOURNAL, pointed out the unwisdom of merely emphasizing the dangers of the venereal diseases, and the advisability of education of a positive or constructive type along these lines. It may be of interest to note that the National Institute of Moral Instruction is now preparing an illustrated lecture which will deal in a general way with the subject of sex hygiene along the lines indicated. A number of the most prominent educators and capitalists in the country are interested in this organization, and an endowment fund of $500,000 is being raised to extend the work. A number of illustrated lectures on various topics have been prepared and are being given in various cities, especially in high schools, academies, etc. These illustrated lessons, consisting of from fifty to one hundred lantern slides and a printed, illustrated text, are sent by express from four local distribution centers, Baltimore, Knoxville, Chicago and Berkeley, Cal., to all parts of the United States for use by teachers, principals and superintendents. The lessons are intended for use during school hours, the teacher delivering the text while the pictures are being shown. The importance of a lecture which would thus visualize the importance of sex hygiene, reaching as it would thousands of young men, can scarcely be overestimated. Mr. Milton Fairchild, the able and energetic director of instruction of the organization, is now engaged in the preparation of such a lecture, which he proposes to entitle "A Gentleman's Treatment of Women." As a tentative outline, he plans to present the subject matter under the following heads: 1. The beast in man. 2. The dangers of promiscuity make it the practice of a fool. 3. The degeneration of self-abuse. 4. The manliness and honor of continence. 5. The practice of self-control. 6. Purity of mind and body a preparation for marriage. 7. The ideal marriage. 8. Eugenics. 9. A gentleman's treatment of women.

Without offering any personal criticisms of this outline, I am presenting it, at the request of Mr. Fairchild, to the readers of THE JOURNAL for their criticisms and suggestions, which Mr. Fairchild requests be sent to him directly and which he will appreciate very much. His address is 903 Calvert Building, Baltimore.

EMIL NOVAK, Baltimore,
General Secretary, Maryland Society of Social Hygiene.

Thyroidectin in Exophthalmic Goiter

To the Editor:—Having read with interest the article on "Treatment of Exophthalmic Goiter with Thyroidectin" (THE JOURNAL, April 22, p. 1176) I desire to report one case. I realize fully that one case proves nothing, but I desire to contribute one instance to the sum of collective observation.

The patient, Miss H., aged about 35, housekeeper, came for treatment Sept. 1, 1910, presenting a typical case of exophthalmic goiter. The pulse-rate was 140; the neck measured 15 inches in circumference; marked protrusion of the eyes was present, with tremor, heart murmurs, systolic thrill over the thyroid, etc. The thyroid gland was the size of an average hen's egg, central and uniform in shape. The patient was given thyroidectin 5 gr. capsules three a day, one after each meal. This was continued to October 10, about six weeks, with no discoverable improvement in any way. On the suggestion of a brother practitioner, I changed to quinin hydrobromid, 5 gr. three times a day, after meals, and after five months of that medication, with occasional interruption of one week, the results are certainly remarkable. No other treatment was given; no suggestions were made in regard to hygiene or mode of life, and the patient continued about her work as before.

About the middle of March the pulse was 80, and the neck measured 13½ inches, the reduction of 1½ inches in circumference being due to the disappearance of the growth, as only a normal thyroid could then be felt; the tremor had disappeared; there were no heart murmurs, or thrill over the neck, as there was nothing to thrill. The exophthalmos, however, still persists, though it is possibly not so marked as before the beginning of the treatment, and I fear that the condition may be permanent. During each of the one-week intermissions of the quinin hydrobromid, the patient would not be so well, and the pulse-rate would increase; but during the first week after resuming the remedy, there would be a marked improvement, more noticeable than during the weeks of continuous administration.

W. F. WILSON, Lake City, Minn.

President Taft on Beriberi Among the Japanese

To the Editor:—There was a rather important clerical error in the typewritten manuscript furnished you for President Taft's speech before the Medical Club of Philadelphia. [THE JOURNAL, May 13, 1911, page 1400, middle of first column.] He said, "I need not go further than to say that twenty-four per cent. of the sick of the Japanese army were afflicted with beriberi during the Russo-Japanese War." The words "sick of the" were omitted in this sentence, just before the word "Japanese." It seems to me the error is so obvious that it will not make any great difference, except to certain literal souls who will perhaps write to inquire about it. I am asked to write you in the name of the White House to make the correction, with the statement that it was a clerical error.

J. R. KEAN, Washington, D. C.

XUM

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

RECENT LITERATURE ON BONE-GRAFTING

To the Editor:—Please refer me to recent literature on bone-grafting. I have a patient with a part of the tibia lost and I want to insert a bone if possible. Has this been done with success?

J. F. CLARK, Fairfield, Iowa.

ANSWER.—Bone-grafting, bone-transplantation and bone-transference have been successfully employed in a number of cases for the purpose of supplying defects in the long bones.

Huntington (*Ann. Surg.*, xli, 249) and Codman (*Ann. Surg.*, xlix, 820) both report interesting cases of bone-transference in which the fibula was made to supplant a defect in the tibia.

In the article on "Intrahuman Bone-Grafting" (*Ann. Surg.*, December, 1909) Mac Ewen describes a method of grafting small particles of bone to fill in bone defects.

Magruder writes on "Bone-Grafting and Osteoplasty" (*Washington Med. Ann.*, July, 1910, and in *Surg., Gynec. and Obst.*, August, 1910).

Tomita (*Deutsch. Ztschr. f. Chir.*, xc, 247) mentions several cases of bone-transplantations. In one case he successfully transplanted 12 cm. of bone from a calf to fill in a defect of the tibia in a man and in another case he used the femur of a rabbit. These are successful cases of heteroplasty. Several cases of autoplasty or the transference of pieces of the tibia to fill in a defect in the same bone at another point are also reported.

Heller (*Ergebn. d. Chir. u. Orthop.*, vol. i) reviews the whole subject of transplantation and his article contains a bibliography of recent literature on the subject.

PHYSIOLOGIC ACTION AND THERAPEUTIC USES OF COTTON-SEED OIL

To the Editor:—1. What are the physiologic action and therapeutic uses of cotton-seed oil?

2. What is the average dose, the maximum dose, and how often should the dose be repeated?

3. What are the comparative food values of cotton-seed oil, olive oil, and eggs?

J. A. BURNETT, M.D., Marble City, Okla.

ANSWER.—1. Cotton-seed oil has the action of other fats and fixed oils. It hinders to some extent the secretion of gastric juice, and tends to provoke the regurgitation of bile and pancreatic juice into the stomach. In the intestine it undergoes saponification and if in excess is excreted with the feces rendering the passages softer and of a light color.

Therapeutically it may be used in place of olive oil to restrain hyperacidity, allay irritation, and relieve pain in the intestinal canal.

2. The dose is from a teaspoonful to a tablespoonful or more, given with or after meals.

3. Oils consist practically of pure fat, which yields 9.1 calories per gram. Half an ounce of cotton-seed oil or olive oil would yield approximately 135 calories; either is equivalent to one and one-half eggs.

The Public Service

Medical Department, U. S. Army

Changes for the week ended May 13, 1911.

Snyder, H. McC., lieut., ordered to Fort D. A. Russell, Wyo., for duty on completion of examination for promotion.

Phelan, Henry du R., M.R.C., ordered to Fort Barry, Cal., for duty.

Dickenson, C. F., M.R.C., relieved from duty at Fort Barry, Cal., and ordered to Fort Duchesne, Utah, for duty.

Bayley, Edmund W., M.R.C., ordered to Fort Sill, Okla., for duty.

Holmberg, Carl E., lieut., relieved from Presidio of San Francisco and assigned to duty at Army General Hospital, Fort Bayard, N. Mex.

VanHorn, James B., M.R.C., relieved from further duty in the Philippines division and assigned to duty at Army General Hospital, Fort Bayard, N. Mex.

Kendall, William P., lieut.-col., leave of absence extended one month.

Brown, Ira C., M.R.C., ordered to proceed to Fort Douglas, Ariz., for duty in the field.

Freeman, Charles E., captain, assignment to duty with troops for station at Yosemite National Park, Cal., is revoked, and instead assignment to duty at Army General Hospital, San Francisco.

Richardson, William H., captain, assigned to duty with troops from Presidio of San Francisco for station in Yosemite National Park, Cal.

Bayley, Edmund W., M.R.C., ordered to accompany the 55th Company, C. A. C., from San Francisco to Fort Du Pont, Del., on the completion of this duty to proceed to Fort Sill, Okla., for station.

Miller, R. M., captain, granted thirty days' leave of absence.

Long, Charles J., D.S., granted thirty days' leave of absence.

Purnell, H. S., captain, relieved from duty at the Army General Hospital, San Francisco, and ordered to Madison Barracks, New York, for duty.

Medical Corps, U. S. Navy

Changes during the week ended May 13, 1911.

Butler, S. St. J., surgeon, detached from the naval medical school, Washington, D. C., and ordered to the Asiatic station.

Zalesky, W. J., P. A. surgeon, detached from the *Salem* and granted sick leave for two months.

Wheeler, L. H., P. A. surgeon, detached from the *Virginia* and ordered to the *Salem*.

Halsey, W. H., asst.-surgeon, detached from the naval medical school, Washington, D. C., and ordered to the *Virginia*.

Ames, M. H., P. A. surgeon, detached from the *Albany* and ordered to the *Helena*.

Dessez, P. T., P. A. surgeon, detached from the *Helena* and ordered home.

Higgins, S. L., P. A. surgeon, detached from the naval hospital, Yokohama, Japan, and ordered home.

Thomas, G. E., asst.-surgeon, detached from the *Saratoga* and ordered to the naval hospital, Yokohama, Japan.

Ohnesorg, K., surgeon, ordered to the Navy Yard, New York.

May, H. A., P. A. surgeon, detached from the naval hospital, Las Animas, Colo., and ordered to duty at the naval medical school hospital, Washington, D. C.

Holloway, J. H., P. A. surgeon, detached from the naval hospital, New York, and ordered to duty and treatment at the naval hospital, Las Animas, Colo.

Woodland, E. E., A. A. surgeon, detached from the naval medical school, Washington, D. C., and ordered to the *Iowa*.

Dickinson, D., Jr., A. A. surgeon, ordered to the marine recruiting station, Cincinnati.

Kindleberger, C. P., surgeon, detached from the navy yard, Mare Island, Cal., and ordered to the naval station, Guam, M. I.

U. S. Public Health and Marine-Hospital Service

Changes for the seven days ended May 10, 1911.

Carter, H. R., surgeon, directed to proceed to Cairo, Ill., on special temporary duty.

Banks, C. E., surgeon, granted ten days' leave of absence from May 10, 1911.

Carmichael, D. A., surgeon, granted fourteen days' leave of absence from May 26, 1911.

Williams, L. L., surgeon, directed to proceed to Vineyard Haven, Mass., on special temporary duty.

Geddings, H. D., surgeon, granted one month's leave of absence on account of sickness.

Brown, B. W., surgeon, leave of absence for one month on being relieved by Surgeon F. W. Mead amended to read "nine days from Dec. 6, 1910."

Lumsden, L. L., P. A. surgeon, detailed to attend the annual meeting of the Ohio State Medical Association at Cleveland, Ohio, May 8 to 11, 1911.

Billings, W. C., P. A. surgeon, granted seven days' leave of absence from April 8, 1911, under paragraph 191, Service Regulations.

Salmon, T. W., P. A. surgeon, leave of absence for two months and ten days from Feb. 8, 1911, amended to read "one month and twenty-three days from Feb. 8, 1911, and seventeen days from April 1, 1911, on account of sickness."

Ashford, F. A., P. A. surgeon, granted seven days' leave of absence from April 12, 1911, under paragraph 191, Service Regulations.

Kaplan, M. I., A. A. surgeon, granted seven days' leave of absence from April 12, 1911, under paragraph 210, Service Regulations.

Moorer, M. P., A. A. surgeon, leave of absence for ten days from March 28, 1911, amended to read "twenty-four days from March 28, 1911, on account of sickness."

Porter, Joseph Y., Jr., A. A. surgeon, granted eight months' leave of absence from May 1, 1911, without pay.

Torres, J. F., A. A. surgeon, granted thirty days' leave of absence from May 22, 1911, with pay, and five months' from June 22, 1911, without pay.

Bowie, R. I., sanitary inspector, died at Nagasaki, Japan, April 24, 1911.

Board of medical officers convened to meet at the bureau, May 22, 1911, for the examination of candidates for admission to the service. Detail for the board: Surgeon R. M. Woodward, chairman; Surgeon J. O. Cobb; Passed Assistant-Surgeon W. C. Rucker, recorder.

Strangulated Hernia.—B. B. Davis, in the *Western Medical Review*, emphasizes the following points: (1) decrease of the number of candidates for strangulation by a more general employment of operations for radical cure; (2) operation in all cases in which the hernia is not well retained by trusses, or in which it is otherwise unusually liable to become strangulated; (3) condemnation of prolonged or harsh methods of employing taxis; (4) immediate operation in every case of strangulated hernia that is not quickly reduced by gentle taxis; (5) in cases of gangrene of bowel in the late cases the superiority of resection rather than any of the make-shift procedures so uniformly unsuccessful.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

DELAWARE: State Society and Homeopathic, Dover and Wilmington, June 20. Secretary of the Medical Council, Dr. H. W. Briggs, Wilmington.

ILLINOIS: Coliseum Annex, Chicago, June 13-15. Sec., Dr. James A. Egan, Springfield.

IOWA: Capitol Bldg., Des Moines, June 5-7. Sec., Dr. Guilford H. Sumner.

KANSAS: Hotel Grund, Kansas City, June 13. Sec., Dr. H. A. Dykes, Lebanon.

KENTUCKY: The Armory, Louisville, May 31. Sec., Dr. J. N. McCormack, Bowling Green.

MARYLAND: 1211 Cathedral St., Baltimore, June 20. Sec., Dr. J. McPherson Scott, Hagerstown.

MICHIGAN: University Bldg., Ann Arbor, June 13. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.

MINNESOTA: State University, Minneapolis, June 20. Sec., Dr. W. S. Fullerton, 214 American National Bank Bldg., St. Paul.

MISSOURI: Gymnasium of St. Louis University, St. Louis, June 12-14. Sec., Dr. Frank B. Hiller, State House, Jefferson City.

NEBRASKA: State House, Senate Chamber, Lincoln, May 24. Sec., Dr. E. Arthur Carr, 141 S. 12th Street

NEW JERSEY: Capitol Bldg., Trenton, June 20-21. Sec., Dr. H. G. Norton.

NEW YORK: May 23-26 and June 27-30. Mr. Harlan H. Horner, Chief of Examinations Division, Department of Education, Albany.

NORTH CAROLINA: Charlotte, June 14. Sec., Dr. Benjamin K. Hays, Oxford.

OHIO: Columbus, June 6-8. Sec., Dr. George H. Matson, State House.

PENNSYLVANIA: Regular, Homeopathic and Eclectic, Philadelphia and Pittsburg, June 27-30. Secretary of the Medical Council, Mr. Nathan C. Schaeffer, Harrisburg.

SOUTH CAROLINA: State House, Columbia, June 13. Sec., Dr. A. Earle Boozer.

TEXAS: Austin, June 27-29. Sec., Dr. J. D. Mitchell, Fort Worth.

VIRGINIA: Richmond, June 20-23. Sec., Dr. R. S. Martin, Stuart.

WISCONSIN: Milwaukee, May 24-26. Sec., Dr. John M. Beffel, 3200 Clybourn St., Milwaukee.

WYOMING: University of Wyoming, Laramie, June 6-8. Sec., Dr. J. B. Tyrrell.

Ohio January Reciprocity Report

Dr. George H. Matson, secretary of the Ohio State Medical Board, reports that at the meeting held Jan. 3, 1911, fifteen candidates were licensed through reciprocity. The following colleges were represented:

LICENSED THROUGH RECIPROCITY

College	Year Grad.	Reciprocity with
Rush Medical College	(1909)	Illinois
Indiana University	(1910)	Indiana
Tufts College Medical School	(1906)	Maine
Harvard University Medical School	(1906)	New York
College of Physicians and Surgeons, Baltimore	(1910)	W. Virginia
University of Michigan, Department of Medicine and Surgery	(1889) (1906) (1909) (1910)	Michigan
University and Bellevue Hospital Medical College	(1910)	New York
Long Island College Hospital	(1909)	New York
Eclectic Medical College, Cincinnati	(1909)	W. Virginia
Western Reserve University	(1886)	W. Virginia
Laura Memorial Woman's Medical College	(1897)	Michigan
Woman's Medical College of Pennsylvania	(1909)	New Jersey

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POSTGRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Tenth Month—Fourth Weekly Meeting

WOUNDS AND THEIR MEDICOLEGAL RELATIONS

INCISED WOUNDS: Appearances, depth, length, direction, shape. Value as indicator of weapon used.

CONTUSED WOUNDS: Appearances, color changes, character of weapon, degree of force or violence. Relation of local lesion to injury to deeper structures; fractures, ruptured viscera.

PUNCTURED WOUNDS: Character of weapon; size, shape, direction, depth of wounds. Injury to deep structures.

GUN-SHOT AND PISTOL-SHOT WOUNDS: Wound of entrance, shape, size, edges, discoloration, powder burns; variations due to shape and momentum of missile, distance, angle of incidence, and tissues injured. Injury to tissues in track of missile. Injury to muscle, fascia, bones, etc. Deflection of bullet. Foreign substances in tissues. Wound of exit, shape, size, relation to wound of entrance.

LACERATED WOUNDS: Character of weapon or injury. Appearances.

HOMICIDAL, SUICIDAL AND ACCIDENTAL WOUNDS: Situation, usual site in suicide. Nature of wounds, extent and number, direction of wound. Bearing of sex. Position of body. Environment.

DISTINCTION BETWEEN ANTE-MORTEM AND POST-MORTEM WOUNDS: 1. Evidences of free bleeding. 2. Clotted blood about edges of wound, and infiltration of surrounding tissues. 3. Retraction of edges. 4. Swelling and injection of edges. 5. Retraction of sides of wound under skin. Differences in incised, punctured, lacerated, contused and gunshot wounds.

Monthly Meeting

Pistol-Shot Wounds in Their Medicolegal Relations.

Infanticide; Evidences of Live Birth; Cause and Manner of Death.

The Legal Status of the Medical Expert in This State.

NOTE: This completes the course as outlined for the year.

Book Notices

A SYSTEM OF OPHTHALMIC OPERATIONS. Being a Complete Treatise on the Operative Conduct of Ocular Diseases and Some Extraocular Conditions Causing Eye Symptoms. Edited and Partly Written by Casey A. Wood, M.D., C.M., D.C.L., Late Professor of Ophthalmology and Head of the Department, Northwestern University Medical School. Complete in Two Volumes. Volumes I and II. Cloth. Price, $15. Pp. 1824, with 968 illustrations. Chicago: Cleveland Press, 1911.

The extent and comprehensiveness of this work may be realized from the fact that the two large volumes aggregate 1830 pages, and that its composite authorship comprises thirty collaborators. These collaborators include the most distinguished practitioners and authors, and the subjects have been assigned to them so that the whole list of surgical diseases and operations on the eye is covered.

In addition to the chapters on purely technical subjects there is a short chapter on the history of ophthalmic surgery by Mortimer Frank, with brief biographical sketches of the originators of operations in this branch of surgery and of men prominent in the development of ophthalmology. There is also a rather exhaustive chapter on the forensic relations of ophthalmic surgery by Thomas Hall Shastid. Both of these are apropos in a work of this character and are well done by their respective authors.

In a brief review of a book containing the work of so many distinguished ophthalmologists it would be impossible even to mention the excellencies of the work of each; so that with no desire to make invidious distinctions we may comment on certain features of the book. The chapters on minor ophthalmic surgery, the extraction of senile cataract, operations on the retina and orbital operations, by the editor, Dr. Casey Wood, are admirable. The first mentioned chapter at once expands the usefulness of the work beyond the limit of the skilled ophthalmic surgeon and furnishes much information of the greatest value to the general practitioner who must, perforce, treat many minor ophthalmic conditions.

The chapter on the surgery of the ocular muscles by Jackson should afford a feeling of satisfaction to the surgeon. Jackson speaks with the authority of experience, knowledge and judgment in presenting his own views, and at the same time does not slight the work nor the opinions of others.

XUM

Çataract, always one of the most important subjects with which the eye surgeon has to deal, is fully covered by Casey Wood, D. W. Greene, Peter Callan and Myles Standish, Greene furnishing a chapter on the intracapsular operation according to the Smith method, maintaining with force that while it may have its shortcomings, as do most other cataract operations, it is entitled to a distinct place in the surgery of cataract. The two chapters by Frank Brawley and A. E. Halstead, the first on the surgery of the sinus conditions affecting the eye, and the other on the surgery of other collateral conditions influencing vision, as pituitary and other brain tumors, or conditions requiring decompression operations, are features of great value. The editor has thus wisely recognized the fact that the limits between general and ophthalmic surgery have, during the past few years, become more and more narrow.

The general plan of the work is the same as that followed in the "System of Ophthalmic Therapeutics," the two volumes before us serving as a supplement to it, and the three comprising a complete system of ocular treatment.

The illustrations are a distinguishing feature of this book, and of themselves raise the work into the ranks of *éditions de luxe*. It can be said without fear of contradiction, that no work on ophthalmic surgery rivals it in this particular. The pictures are almost all original, and effectively assist in elucidating the text.

The editor and also the ophthalmologists of this country are to be congratulated on the completion of this great work. It has its imperfections and errors, but they are few and unimportant as compared with the thoroughness, care and scientific exactness maintained by most of the chapters. This system should be in the possession of every English-speaking ophthalmic surgeon.

CASE HISTORIES IN PEDIATRICS. A Collection of Histories of Actual Patients Selected to Illustrate the Diagnosis, Prognosis and Treatment of the Most Important Diseases of Infancy and Childhood. By John L. Morse, A.M., M.D., Assistant Professor of Pediatrics, Harvard Medical School. Cloth. Price, $3. Pp. 314, with illustrations. Boston: W. M. Leonard, 1911.

In this book the author presents the case histories of 100 actual pediatric cases from his practice, which cover fairly completely all the important diseases of children. These cases are classified systematically, as in any text-book, in the table of contents, for easy reference. In the text the history and physical examination are given first, and the diagnosis follows in heavy type after the clinical evidence is weighed. The prognosis and treatment follow. The reader can thus take up each case as a new patient that presents himself for diagnosis without knowing the diagnosis in advance. This method of teaching from case histories has been in use at Harvard for ten years and commends itself to Morse as "almost as valuable as the clinical lecture in which the patient is shown," and as "surpassed only by bedside instruction to small groups of students." His favorable experience with this method of teaching both graduates and undergraduates has led him to feel that "there was need for the utilization of this method for the presentation of the subject of pediatrics to the practitioner." The book is written in Dr. Morse's well-known direct and vigorous style and makes interesting and profitable reading to any one interested in the diseases of children.

HISTORY OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION. With Biographies of its Presidents, Complete Roster of its Officers, Programs of its Meetings, and the Past and Present Laws Relating to the Practice of Medicine in Mississippi. Cloth. Pp. 171. Dr. E. F. Howard, Secretary, 506 First National Bank Building, Vicksburg, Miss., 1910.

This book was written because the secretary of the Mississippi State Medical Association when he entered on the duties of the office found "an entire absence of records." "There was not even a file of the official transactions, due to the fact that at least twice the secretary's office had been wiped out by fire." Finding it impossible for the Mississippi State Medical Association to obtain a complete set of transactions, Dr. Howard undertook to abstract the items that appeared to him to be of particular interest from copies which he was able to borrow. These abstracts have been made the basis of this history. Along with the history of the association are the other documents named in the title. Possibly this book will suggest to other state associations the desirability of similar work.

The author acknowledges that the book is by no means complete or perfect. Important events in the society's history must have escaped his knowledge. When the members have offered their constructive criticism, a second edition, revised and enlarged, might be written.

THE NINTH YEAR-BOOK OF THE NATIONAL SOCIETY FOR THE STUDY OF EDUCATION. Part II, The Nurse in Education. By Thomas D. Wood, A.M., M.D., Professor of Physical Education, Teachers College and Columbia University; M. Adelaide Nutting, Professor of Nursing and Health, and of Household Administration, Teachers College, New York City; Isabel M. Stewart, Instructor in Nursing and Health, Teachers College, New York City, and Mary L. Read, B.S. Supplement to the Year-Book on "Health and Education" Discussed at the Indianapolis Meeting of the National Society, Feb. 28, 1910. Paper. Price, 78 cents. Pp. 76. The University of Chicago Press, Chicago.

The second part of the Ninth Year-Book of the National Society for the Study of Education deals with the nurse and contains, beside an introduction by Dr. Thomas D. Wood and a valuable bibliography, two papers: one on "The Educational Value of the Nurse in the Public School," by Isabel M. Stewart, and one on "Professional Training of Children's Nurses," by Mary L. Read. The first paper emphasizes a function of the trained nurse which has not been generally considered. The value of the properly trained nurse to the physician, to the hospital and to the patient has been repeatedly discussed, but the educational value of the nurse to the public has been given comparatively little attention. The paper is an opportune one in view of present-day developments along this line.

PRINCIPLES OF PUBLIC HEALTH. A Simple Text-Book on Hygiene Presenting the Principles Fundamental to the Conservation of Individual and Community Health. By Thomas D. Tuttle, M.D., Secretary and Executive Officer of the State Board of Health of Montana. Cloth. Price, 50 cents net. Yonkers-on-Hudson, N. Y.: World Book Co., 1910.

This little book is the fourth one of a series issued for use in the public schools. While necessarily elementary, it is so written and illustrated as to interest and instruct the child. The book in the main is excellent, although one might wish that such illustrations as the one on page 64 showing "the effect of cigarette smoking" had been omitted.

Miscellany

CLIPPINGS FROM LAY EXCHANGES

Another Group of These Popular Quotations

MUST HAVE HIT HIM IN THE NECK

"He escaped with a sprained ankle, which is remarkable, as the machine struck him between the lamp and the radiator."—Sibley (Ia.) *Gazette.*

WILL IT ALSO MILK THE COW?

"The V.... Pharmacy . . . has been named as a supply station for antitoxin. . . . The antitoxin will be used in cases of diphtheria, to prevent blindness in newly born babes, for throat cultures and in the examination of blood in typhoid and malarial cases."—Cleveland *Plain Dealer.*

SOUNDS AS THOUGH SHE WOULD MISS WEDNESDAY TOO

"Miss B.... W.... was unable to attend to her school duties Monday and Tuesday on account of an attack of cerebral cusa."—Roundup (Mont.) *Tribune.*

FORTUNATELY HIS LEFT RIB ESCAPED

"While cranking hic automobile, T.... C.... sustained what is technically known as a Colles fracture of the right rib."—San Francisco *Chronicle,* Feb. 2, 1911.

NO TROUBLE FOR AN OSTEOPATH

"Dr. C. D. V...., the osteopath . . . witnessed an operation while at Kirksville. The operation consisted in the removal of part of the spinal column of a man who was paralyzed. . . . He came out from the operation all right and the physicians all thought he would get well without any trouble."—Atlantic (Ia.) *Telegraph,* Jan. 5, 1911.

INTERNATIONAL GAS FACTORY

"Dr. W. H. W...., the Philadelphia physician decorated by the Kaiser, was already the one American doctor who enjoys the distinction of having a bacillus named for him. And the Bacillus Welchii is the gas bacillus dwelling in the international track."—Boston *Record*, April 8, 1911.

THE BLIND LEADING THE BLIND

"Dr...., on account of failing eyesight and nervousness, has concluded to abandon dentistry and take up optics. He has already partly completed a college course."—Johnstown (Pa.) *Daily Democrat*.

BROKE HIS KNOB—AND THEY SAY THERE'S NO REMEDY

"Mr. F. P. B.... who was injured ... by stepping from a moving train, was examined by a specialist in Columbus last Monday; and it was found that the knob, on the end of the bone that worked in the socket at the hip joint, was broken from the bone, and that no operation could remedy the injury."—*Marion County Patriot*, Buena Vista, Ga.

A NEW SYNONYM—SOUNDS ODD, BUT CERTAINLY IS DESCRIPTIVE

"Alice H...., an English actress, died suddenly of optical goiter at Roosevelt Hospital, New York."—*Dramatic Mirror*.

FANCY COLORED FITS

"Three surgeons were called to prove that he would always be a sufferer from chromatic epilepsy."—Erie (Pa.) paper.

ABERRATIONS

"The cause of death was given as shock and acute lumbar pneumonia following six gunshot wounds."—Chicago *Record-Herald*, Jan. 25, 1911.

"Dr. W. R. M...., is recovering from an operation for rhynophima, or 'big nose,' at the Protestant Hospital."—Cincinnati *Post*, March 7, 1911.

"Mrs. M.... died yesterday of diabetes mylitis."—Worcester (Mass.) *Telegram*.

ODD STATEMENTS IN PREVIOUS HISTORY

Naturally, applicants for life-insurance may be expected to put as good a face as possible on the reports concerning relatives and the causes of their deaths, but they sometimes make rather amusing statements. Some one has collected a few of these which were originally published in the *British Medical Journal*.

"Mother died in infancy."
"Father went to bed feeling well, and the next morning woke up dead."
"Grandfather died suddenly at the age of 103. Up to this time he bid fair to reach a ripe old age."
"Applicant does not know cause of mother's death, but states that she fully recovered from her last illness."
"Applicant has never been fatally sick."
"Applicant's brother, who was an infant, died when he was a mere child."
"Grandfather died from gunshot wound, caused by an arrow shot by an Indian."
"Applicant's fraternal parents died when he was a child."
"Mother's last illness was caused from chronic rheumatism, but she was cured before death."
"Father died suddenly; nothing serious."

There is a delightful innocence about some of these. Take the last, for example. This has a western flavor, as though the applicant appreciated father's having made little fuss about it. When the time came he simply went, that was all.

Vaccination.—In Manila, during Spanish times, there were so many deaths from small-pox that it was necessary to erect in that city a large temporary hospital for the victims, most of whom died. During the last five years no one who had been successfully vaccinated during the five previous years has died in Manila. No one at all has died there since June, 1909. In large cities, and in localities which are easily accessible, the disease is now mild. Owing to a combination of circumstances vaccination, which was begun twelve years ago by the American sanitary authorities, was suspended in Bagac during a period of nine years. A bad epidemic broke out, but when vaccination was begun again no new cases occurred. The official reports from the islands make a very strong document in support of the benefits of vaccination. By the way, the Republicans put a National Bureau of Health into their platform and then took no interest in the subject. The president was enthusiastic about it for a little while and then apparently forgot it. Will the Democrats, who also put it in their platform, pay a little attention to it next winter? A passenger was standing outside the door of a Pullman sleeper when the porter asked him to come inside. "I thought a platform was meant to stand on." "Oh, no, sah, a platform is meant to get in on."—*Collier's*, April 22.

Medicolegal

Poisoning from Ivy Not "Taking" of Poison, But Death Therefrom is Accidental—Visible Marks

The United States Circuit Court, in Minnesota, says that the insured in the case of Dent vs. Railway Mail Association (183 Fed. R. 840) went with his wife to the outskirts of the city of St. Paul, where he, leaving her, walked into some adjacent woods and there cut a branch of oak and a little stick, which he brought back to her. Within a day or two he called her attention to a discoloration between the fingers of his hand which subsequently turned into an eruption that spread to his arms, neck and chest. This eruption progressed and in the latter part of the month he called on a physician who prescribed for him. His condition grew worse, until his death, which the undisputed evidence showed was caused by poison ivy.

He was insured by the association, but its constitution provided: "Nor shall any benefit be paid where death or disability results from voluntarily inflicted injuries, be the member sane or insane; nor from poison or other injurious matter taken or administered accidentally or otherwise." However, the court is very clearly of the opinion that, when it is considered that the word "taken" is used in connection with the word "administered," and that they are both used in connection with the words "accidental or otherwise," it does not include such a case as this one. It must have been an internal taking, and that taking must be the effect of an act voluntary or involuntary of the person injured.

The court thinks that it would shock the ideas of justice of us all to hold that this policy did not include a death by the bite of a poisonous snake. If anything could be considered an accident, that would be so considered, and there is no reason why this association should not pay for such a loss and should not be willing to do so. The clause quoted was undoubtedly inserted to exclude a case of suicide. It was intended to cover such a case, and exempt the company where death resulted from the taking of the insured's own life by the administration of poison by himself; or perhaps to cover such a case as the one in Wisconsin, in which a dentist administered some poisonous substance to his patient.

The next question was whether the circumstances proved in this case showed an accident, and the court thinks that they did, holding that the taking or catching of this poison by cutting the shrub or bush was an accident, and that it came within the terms of the policy.

Nor does the court think that the association could be relieved by reason of the provision in the policy that, "No benefit or sum whatever shall be payable in any case whatever, unless the accident alone results in producing external marks of injury or violence suffered by the body of the member." This does not say when the visible marks must be produced, and it seems to the court that it must be held that it is complied with if such visible marks appear afterwards, though of course it must be established to the satisfaction of the court or jury that those visible marks were the result of the accident. So, if it was established to the satisfaction of the court or jury that these visible external marks were the result of the injury, the fact that they did not appear instantly was not a defense to the suit on this policy of accident insurance.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Los Angeles, June 27-30.

American Assn. of Genito-Urinary Surgeons, New York, June 1-3.
American Academy of Medicine, Los Angeles, June 23-26.
American Dermatological Association, Boston, May 25-27.
American Climatological Association, Montreal, Canada, June 13-14.
American Gynecological Society, Atlantic City, May 23-25.
American Laryn., Rhin. and Otol. Society, Atlantic City, June 1-3.
American Laryngological Association, Philadelphia, May 29-31.
American Medico-Psychological Association, Denver, June 19-20.
American Otological Society, Atlantic City, June 26-27.
American Pediatric Society, Lake Mohonk, May 31-June 2.
American Proctologic Society, Los Angeles, June 26-27.
American Surgical Association, Denver, June 19-21.
Conf. of Bds. of Health of N. America, Los Angeles, June 30-July 1.
Connecticut State Medical Society, Hartford, May 24-25.
Louisiana State Medical Society, Shreveport, May 30-June 1.
Maine Medical Association, Augusta, June 28-29.
Massachusetts Medical Society, Boston, June 13-14.
Nat'l Assn. for Study and Prev. of Tuberculosis, Denver, June 20-21.
National Association for Study of Epilepsy, St. Louis, June 16.
New Jersey, Medical Society of, Spring Lake, June 13-15.
North Carolina, Medical Society of State of, Charlotte, June 20.
Rhode Island Medical Society, Providence, June 1.
Wisconsin, State Medical Society of, Waukesha, June 7-9.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND

One Hundred and Thirteenth Annual Meeting, held at Baltimore, April 25-27, 1911

The President, DR. FRANKLIN B. SMITH, Frederick, in the Chair

A list of officers elected was published in THE JOURNAL, May 13, p. 1396.

A resolution was adopted providing for the appointment of a committee of five to investigate and report on conditions surrounding the care of inebriates in the state, with the view of obtaining such legislative measures as may seem warranted.

A resolution was adopted reciting that, since the completion of the Panama Canal without serious mortality from epidemic and endemic diseases will be a signal triumph of the appreciation of scientific discoveries in the field of preventive medicine, the opening of the canal should be marked by conspicuous recognition of these and kindred services of preventive medicine in the advancement of human welfare and the reclamation of tropical regions to civilization, and that such recognition may be secured and such an occasion fittingly commemorated by the holding of an international congress of tropical medicine.

The Profession of Medicine and Its Relation to the State

DR. FRANKLIN B. SMITH, Frederick: In matters of public interest, such as health and sanitation, pure food, education and the conservation of mental and physical resources, medical men should lead and dominate the laity. Our practice is too continuously on the individual. It should take a wider range, grasp greater subjects, such as pertain to the protection and elevation of society, subjects embracing the prevention of disease and the best means of overcoming ignorant opposition. The value of experimentation on living man and on the lower animals is so evident that it is incompatible with our ideas of good education and common sense to deny it; but, on the other hand, under the present development of modern civilization, no preventable pain, cruelty or torture to either man or animal can be tolerated. Therefore the sensible—not the fanatic—opponents of vivisection may be met squarely and convinced of its necessity and its benefits, while the reasonable prejudices and fears of humane people may be allayed by such restrictions as will make it a certainty that these experiments are never unnecessarily performed or needlessly painful.

Other professions, educators and workers interested in the welfare of the state must be drawn into their proper relation to us and such mutual cooperation secured as will bring about harmonious but well-rounded and developed schemes of advancement. Organized charity, public and private, education and general economics, all offer more inviting fields of usefulness and glory as specialties for the progressive medical man than the overcrowded ranks of surgery, obstetrics, gynecology and even general practice. The subject of the control of the evils of intemperance by restriction of the manufacture and sale of the so-called intoxicants has been before the public for a long time. Much time, money and energy have been spent by able and earnest men known as prohibitionists, advocates of high license, antisaloon leaguers and pledge enthusiasts. Our profession has never taken the part it should take in this question of vast economic importance. This matter has been treated as a religious or political question, or else as one of morals or economics. While in reality it is all of these, in its more essential aspects it is, above all, a medical question.

In the administration and disbursement of its public charities, however, the state needs counsel more than in any other of its departments. In these matters the members of the medical profession are directly interested both as medical men and as citizens. Public money should be disbursed only for value received. Commissions should be appointed because of the merit and fitness of their members rather than because of their political records and influence. The licensing or chartering of hospitals should be entrusted to this sort of control, with power to prescribe the standard of equipment and service without which they could not lawfully prosecute their work. Our efforts should be for higher standards of attainment for our profession, a more general and more discriminative education of the laity in medical matters, greater influence by means of better men on our state boards, a general standardization secured through organization and through the representatives of our national association, cooperation and agreement leading to uniformity of state legislation, rather than the enactment of national laws.

The annual oration was on "Phylogenetic Association in Relation to Exophthalmic Goiter and Sexual Neurasthenia," by Dr. George W. Crile, Cleveland, Ohio.

The Tonsil Question

DR. H. E. PETERMAN, Baltimore: There is much difference of opinion as to the physiology and functions of the tonsils. It is my belief that the tonsils perform an important function in childhood, and I seldom perform a tonsillectomy in children under 6 years of age, unless there is some special condition demanding it. Tonsillectomy should always be classed as a major operation, because it is usually necessary to give a general anesthetic, and also because of the fact that severe hemorrhage is often encountered and in this region is difficult to control. When the patient is an adult and not of the nervous type, it is easier and more satisfactory to perform the operation under local anesthesia. The operation should always be done in a hospital. When a general anesthetic is used, ether should always be chosen, unless there is some special contraindication. The key to the successful enucleation of the gland consists in getting properly started under the capsule or between the capsule and the parts beneath. The dangers of the operation are hemorrhage, injury of the muscular structures surrounding the tonsils and infection of the wound.

DR. WILMER BRINTON, Baltimore: I am glad that Dr. Peterman does not advocate the wholesale removal of tonsils which is practiced by a good many men, for it is quite certain that there will sooner or later be a reaction against this practice, just as there has been against the indiscriminate removal of ovaries.

Case of Pneumococcus Peritonitis

DR. HARVEY G. STONE, Baltimore: The patient, a female child, 5 years old, had pneumonia two years ago, complicated by acute otitis media. After recovery from the pneumonia the otitis persisted and became chronic, with frequent exacerbations of earache and discharge. On March 30, following an indiscretion of diet on the previous evening, she was seized with sudden severe abdominal pain and vomiting, fever and diarrhea. The fever and pain, which was generally distributed over the abdomen, but most acute over the umbilicus, persisted, as did the diarrhea, in spite of calomel. There was slight symmetrical distention of the abdomen in the lower half. There was no localized tenderness and no masses were felt. On opening the abdomen thick greenish-yellow pus welled out. The pus was odorless. No lesion accountable for the infection could be found. The bacteriologic report of the pus examination showed pneumococci. In spite of the Fowler position, Murphy treatment, etc., the child died the day after the operation. No autopsy was secured.

(To be continued)

MISSISSIPPI STATE MEDICAL ASSOCIATION

Annual Meeting, held at Jackson, April 10, 1911.

(Continued from page 1414)

A Case of Empyema

DR. ROBERT DONALD, Hattiesburg: In this case, the patient, who was a child whose illness in the beginning simulated malaria, was given antimalarial treatment. Later, an incision was made and drainage instituted. On removal of the tube on the ninth day the cavity refilled and drainage was again instituted, with satisfactory results.

DISCUSSION

DR. J. W. BARKSDALE, Winona: I do not think it necessary to insert a very long tube. All that is necessary is that the tube project into the pus cavity.

DR. S. S. CAROTHERS, Duck Hill: How much quinin was given the child? The case may have been a mild one of pneumonia.

DR. J. T. LONGINO, Jonestown: The cause of the trouble is bacterial infection. If a microscopic examination had been made several bacteria would have been found playing a part in this infection. I am very much opposed to attributing the cause to quinin.

Report of a Case of Ophthalmia Neonatorum and a Case of Hereditary Syphilis

DR. I. W. COOPER, Newton, reported a case of ophthalmia neonatorum and one of hereditary syphilis and their treatment as texts for a discourse on the problem presented by venereal diseases and the duty of the medical profession to attempt their prevention.

DISCUSSION

DR. S. A. MAJURE, Dixon: I want to speak on the point of legislating against promiscuous marriage. Young girls, their mothers not thinking of any trouble, have been allowed to marry men who have been loose in their habits. A life of misery follows.

DR. L. C. FEEMSTER, Nettleton: I think that it would have been better to use the argyrol in a 50 per cent. solution. When we first began to use this drug we used only 10 per cent. But now we do not use less than a 25 to 50 per cent. solution.

DR. R. D. SESSIONS, Natchez: I have been very much disappointed in the use of argyrol. I am much better pleased with nitrate of silver and I believe that it will accomplish more than the use of argyrol. It is the duty of the obstetrician to carry argyrol or nitrate of silver with him; 90 per cent. of the blind children in the asylums are there on account of gonorrheal ophthalmia. Let us prevent it.

DR. ROBERT DONALD, Hattiesburg: I generally carry 50 per cent. argyrol. Dr. Sessions has not had success with it in every case. I also make use of a boracic acid solution.

DR. R. S. CURRY, Columbus: A continuous application is necessary and the strength of the solution is not so important as its continuous use. As good a result is obtained with a 10 per cent. solution if it is applied frequently.

DR. I. W. COOPER, Newton: I now use as strong as 50 per cent. solution.

Some Intestinal Parasites of North Mississippi

DR. L. KOHLHEIM, Guntown, has encountered 327 cases of intestinal parasites in North Mississippi in the past four years. These he classified as follows: *Necator americanus* 269, *Ascaris lumbricoides*, 21; *Oxyuris vermicularis*, 15; *Strongyloides intestinalis*, 5; *Hymenolepis nana*, 17. He touched briefly on prophylaxis and treatment and made a strong plea for an educational campaign as the only means of eradicating these pests.

Acid-Fast Bacteria and Some of Their Points of Difference

DR. L. HART, Meridian, described various methods in the differentiation and cultivation of acid-fast bacteria. He contended that the smegma and leprosy bacilli cannot be differentiated by the animal inoculation test.

DISCUSSION

DR. GUSTAV MANN, New Orleans: I can hardly agree with the author that we cannot grow the leprosy bacillus. Professor Duval has shown that leprosy bacilli will grow in ordinary goldfish.

DR. J. G. GAITHER, Oxford: Within the last year series of experiments were conducted in two cities, New York and Philadelphia, I believe, and in one city they used acid-fast bacteria but not in the other. In those which showed the bacteria ordinary running water was used but when distilled water was used no bacteria were found.

DR. H. B. WOOD, Jackson: Rosenberger has been exceedingly careful in his work. I think he is correct. When he and his associates found tubercle bacilli they were using distilled water. They got this distilled water from a demijohn. Rosenberger asserts that he has never seen tubercle bacilli which do not stain.

Microscopic Findings in the Diagnosis of Uncinariasis

DR. W. S. LEATHERS, Oxford: There are various reasons why the hookworm has not been noticed in the South until recent years. Its prevalence is practically universal. From investigations by the Mississippi State Board of Health in fifteen counties and two institutions it is to be inferred that Mississippi has a large proportion of infected inhabitants. Microscopic examination of feces should be a routine procedure in general practice.

The Limitations of a Laboratory

DR. H. B. WOOD, Jackson: A laboratory is a place of consultation and the diagnosis made there should not be considered as obviating the necessity of clinical observation. A negative diagnosis should not be interpreted "non-existent" but "not found." Some causes of failure to diagnose in the laboratory are due to faulty technic.

Pathology of Acute Malarial Infection

DR. C. R. GARRAWAY, Brandon, described the blood changes due to malarial infection and indicated briefly the theories as to the causation of fever in malaria.

DISCUSSION

DR. J. T. LONGINO, Jonestown: The internal organs probably undergo some changes as a result of damage done by malarial parasites, due to pathologic changes of the blood. The collection of all this waste matter in the organs causes anemia and consequently enlargement of these organs.

Physiology of the Thyroid

DR. A. M. HARRELSON, Newton: A perfect secretion of the thyroid is necessary for the proper development of bone and fat, for the proper functioning of the skin and the development of many functions of the body. It is perhaps the best understood of any of the ductless glands.

Cardiac Stimulants

DR. S. A. EGGLESTON, Lexington, has small faith in any cardiac tonics save digitalis and rarely uses any of them except in presence of some absolute contra-indication of that drug. He described the physiologic effects of and indications for digitalis, comparing it, point by point, with the other cardiac stimulants.

DISCUSSION

DR. R. E. HOWARD, Durant: We are not perfect diagnosticians. Various cardiac troubles frequently give the same symptoms. No drug that we have equals digitalis in these cases, but we must be very careful in using digitalis.

A Forgotten Use of Calomel

DR. S. MYERS, Vicksburg, called attention to the diuretic effect of calomel and the almost universal ignoring of this action of the well-known drug by the latest text-books. He gave some case reports showing this effect.

XUM

DISCUSSION

DR. B. H. BOOTH, Drew: The use of calomel is not forgotten in the Delta. We can always depend on calomel, it is almost magical in its results.

DR. P. R. BROWN, West Point: In my practice I have had no remedy which gives me the same results as calomel. There are some cases in which calomel is the remedy *par excellence.*

DR. S. MYERS, Vicksburg: I know that this remedy is not forgotten in the Delta. It is, however, absolutely forgotten in the teaching in the medical schools. It was with the intention and hope of calling attention to this invaluable drug that I wrote the paper.

Iritis

DR. M. H. BELL, Vicksburg: In this disease treatment gives a good eye and no treatment frequently results in blindness. Symptoms are severe pain, worse at night, redness of eye, contracted and sluggish pupil, blurred vision and lacrimation. The causes are syphilis, rheumatism, trauma, etc.; in the negro race syphilis causes 80 per cent. of cases. Treatment consists in use of atropin, dionin, Arlt's ointment to forehead, leeches to temple and appropriate general treatment directed to the cause if that can be ascertained.

DISCUSSION

DR. H. D. BRUNS, New Orleans: There are three classes of acute inflammation of the iris with which each of us should be familiar: conjunctivitis, iritis or glaucoma. If it is a case of iritis the pain will be greater than if it is conjunctivitis. The other eye must be well covered. If the person has an equally painful eye with discharge, that is conjunctivitis. If atropin be put to the eye in a mild conjunctivitis it is of no avail.

DR. W. L. HOWARD, Greenville: An extremely red eye is an indication of iritis.

DR. R. E. HOWARD, Durant: After one makes a diagnosis of iritis it is necessary to decide whether it is caused by syphilis or rheumatism. In the majority of cases it seems to be due to syphilis.

Glaucoma and Its Recognition by the General Practitioner

DR. HENRY DICKSON BRUNS, New Orleans: Glaucoma is divided into the violently painful, acute type and the simple, non-inflammatory type, with other cases presenting symptoms not wholly of either type. In an acute attack, the patient is alarmed, often awakened by violent pain in the eye, not relieved by the usual domestic remedies. The symptoms are a "raw-meat" red globe, steamy cornea, shallow anterior chamber, dilated pupil, sluggish iris and stony hardness of the eye-ball as compared to the normal eye when tested by fingers applied to the upper lid. The eye will be blind or nearly so. No one who cannot compare tension of two eyes should use atropin in an eye. Fatal mistakes are made in these cases through lack of knowledge and by haste, taking the word of the patient that it is neuralgia or seeing a red eye and concluding that it is iritis. No neuralgia ever made an eye more than slightly pink and an acute iritis does not cause dilatation of the pupil. The family physician is the one who sees these cases at the time that treatment can be beneficial, hence the importance of his making a correct diagnosis. A few hours' delay means hopeless blindness. Though these attacks appear so suddenly in most cases premonitory symptoms have usually passed unnoticed for varying periods. In simple glaucoma the burden lies entirely on the ophthalmologist and at the beginning it will at times be impossible to state definitely that we are dealing with glaucoma until the eye has been under observation for awhile. This type of glaucoma has been found common in the negro race. The treatment is iridectomy and miotics.

DISCUSSION

DR. R. S. CURRY, Columbus: It is important that we recognize the condition early. Atropin is the most dangerous thing for the glaucomatous eye. The dilated pupil and the contracted pupil ought to be sufficient to make us distinguish clearly between iritis and glaucoma. Iridectomy will relieve the pain, and I am very much in favor of this procedure even if the patient is blind. The pain is very acute.

DR. J. B. BULLITT, Oxford: The general practitioner generally ignores the eye; and the conditions in Mississippi are in some respects unfortunate because there are so few ophthalmologists.

DR. N. A. MCLEOD, Brookhaven: I wish to propose a vote of thanks for the paper because I think we all feel indebted to Dr. Bruns.

The motion was seconded and carried.

DR. H. D. BRUNS, New Orleans: It is impossible for any man to say much original about glaucoma. The only point that has any originality about it is the observation relative to the negro being especially liable to glaucoma.

Treatment of Postpartum Hemorrhage

DR. T. H. SEAY, New Hebron: This condition may occur after any labor and many of the predisposing causes may be overcome if treated during pregnancy. Treatment is massage, an intra-uterine douche of acetic-acid solution and packing, combined with such general measures as elevation of the foot of the bed, and ergot hypodermatically.

DISCUSSION

DR. J. H. COOK, Laurel: I visited a patient who had been under the care of a midwife of much experience, who, however, failed to deliver the placenta. She let the patient die. We should not sit by and let a patient bleed to death in these cases. I believe that strychnin is all right in the after-treatment. I have had success with the use of 1/30 or even 1/60 grain of this drug.

DR. W. M. TURNAGE, Marksville: We ought to get rid of midwives in the state of Mississippi.

DR. T. J. BROWN, Grenada: What is the purpose of leaving the placenta in the uterus for thirty minutes? My experience has been that if this were done the patients would all have been dead.

DR. S. W. PURIFOY, Yazoo City: I have seen but one such patient die. I am in favor of delivering the placenta very quickly after birth of the child.

Treatment of Aneurysms

DR. S. W. JOHNSTON, Vicksburg, reported several cases of aneurysm in which he had operated by the Matas method, the most interesting being one of the abdominal aorta.

DISCUSSION

DR. L. D. DICKERSON, McComb City, told of the pain he got in his fingers using pressure for the cure of aneurysms in his college days.

DR. J. A. CRISLER, Memphis, Tenn.: Let us remember that aneurysms may not pulsate.

DR. J. G. GAITHER, Oxford: I likewise have seen cases in which there was no pulsation.

DR. W. B. JOHNSON, Greenville: The smallest and best material for these sutures seems to be Japanese silk.

(To be continued)

MEDICAL SOCIETY OF THE STATE OF NEW YORK

One Hundred and Fifth Annual Meeting, held at Albany, April 18-19, 1911

(Concluded from page 1416)

Significance and Therapy of High Blood-Pressure

DR. J. F. ROONEY, Albany: In summing up, one may say: First, the utility of the vasodilators is conversely apparent with the acuteness of the pathologic condition. Second, eliminative measures, hot air, carbon dioxid baths and catharsis, are of much more marked effect in the toxic group. Third, phlebotomy is of great service in the acute toxic groups accompanied by dilatation of the heart, but has fallen into undeserved disuse. Fourth, blood-pressure determinations alone cannot differentiate between the crises of tabes and intra-abdominal perforations. Fifth, the effect of nitroglycerin is as prolonged as that of any of the nitrite group except erythrol tetranitrate, and that its rapidity of action is as great as any and nearly as great as that of amyl nitrite. Sixth, the use of the aconite group as vasodilators is pharmacologically unfounded, and except in the toxemia of pregnancy with a strong heart muscle should be entirely discontinued.

Hydrotherapeutic Treatment of Chronic Disease of the Heart

DR. JOHN M. SWAN, Watkins: In treatment of chronic diseases of the heart, following the lead of the German and French physicians, particularly those at Nauheim, the value of carbonated brine baths has become a matter of common use. In many hospitals and hydrotherapeutic institutes in the large cities, artificially prepared brines charged with carbon dioxid are used in treatment of cardiac diseases with much benefit. At Glen Springs a natural brine is used in treatment of these diseases. The baths are given on alternate days, so that the complete cure requires six weeks. The carbonated brine baths in suitable cases of cardiac disease produce the following effects: (1) a diminution in the size of the heart; (2) a slowing of the pulse; (3) a slowing of the respiration; (4) reddening of the skin on account of the dilatation of the smaller blood-vessels in the cutis vera; (5) reduction in the size of a congested liver; (6) increased flow of urine. These results are due undoubtedly to the influence of the baths on the cutaneous circulation. The amount of blood in the skin is increased, the blood-vessels of the skin are enlarged in caliber, and as a result the heart is relieved of impediments in satisfying the demand of the circulation, so that the blood-flow is equalized in the viscera.

DISCUSSION

DR. L. F. BISHOP, New York: I am thoroughly convinced of the value of the Nauheim method of treatment with baths, but I hesitate to recommend this method at home without being perfectly sure who is going to give it. I make the latter statement because there are a great many physicians who do not give the treatment in suitable cases. This treatment is not specific; it is the adaptation of a great many different things to bring about a result. In severe cases of arteriosclerosis the carbonic acid gas in the bath is better left out. There is more carbonic acid bath in one artificial bath given by some physician in America than there is in a dozen such baths given at Nauheim.

DR. H. SCHOONMAKER, Clifton Springs: The question of prescribing the Nauheim treatment is an important one to the individual. We must select the cases. We must know what the conditions are. I like the term Nauheim method rather than Nauheim baths because the scheme involves much more than the baths. It will be helpful when the actual results of the so-called Nauheim method can be determined irrespective of other treatments, because we have to admit that our patients are under a very careful regimen of rest and diet, etc.

Olive Oil in Postoperative Nausea

DR. C. R. HYDE, Brooklyn: The use of olive oil to lessen and even control postoperative nausea has not received the attention of surgeons that its success warrants. Just as the patient is beginning to return to consciousness, 2 ounces of ordinary olive oil are administered by mouth from a cup. The patient must be sufficiently out from the ether to understand the command to drink the oil, which is then swallowed without any difficulty. It is of interest to note that after regaining complete consciousness the patient does not even recollect taking the oil. Usually within five minutes after the oil has been given, there is free and copious vomiting, which in the large majority of cases concludes the gastric disturbance. The nurse who gives the oil should be instructed to have at hand a basin and towels, and to remain by the bedside of the patient, as the vomiting which is initiated very soon after the ingestion of the oil is explosive and projectile in character. This precaution is imperative, as some patients will vomit with such a violent expulsive effort as to soil the floor for some distance around the bed. Rarely does a second vomiting attack occur, and within a short time the patient is resting comfortably, so far as the stomach is concerned, and is free from nausea or retching. The method insures a quick, rapid stomach cleansing, usually terminating with this one performance, and should be used as a substitute for gastric lavage on the operating table before the patient is returned to the recovery room or bed.

Surgical Treatment of Exophthalmic Goiter

DR. MARTIN B. TINKER, Ithaca: The symptoms of goiter are the symptoms of poisoning, similar to that produced by narcotic poisoning. The excessive secretion acting as a poison is produced by the thyroid. In removing a portion of the thyroid we remove the cause of the trouble. The over-use of tobacco causes tachycardia and weakness of the heart's action, not at all unlike the condition seen in hyperthyroidism. Excessive use of tobacco also causes nervousness, general unrest, tremor, sleeplessness, sometimes nausea, vomiting and diarrhea. The presence of excessive thyroid secretion in the circulation has a similar effect.

No sensible man would consider it logical to treat tobacco heart or tobacco amblyopia and allow his patient to continue the excessive use of tobacco. It is just as logical to treat exophthalmic goiter with drugs without removing the source of the excessive secretion. No one, whether internist or surgeon, is so radical as to suggest operation in all cases. Osler's advice that surgical treatment should be recommended after three months' careful medical treatment, if the patient is not better, if it were generally followed, would save many lives and restore to efficiency many patients who do not die. Operation should certainly be advised before irreparable damage has resulted to important vital organs. The greatest strain comes on the organs of circulation and the nervous system, but almost every important vital organ suffers in advanced cases. With careful preliminary study of the patient to determine how much can be done with safety, dividing the operation into several short stages of two days or even weeks apart, with operation under local anesthesia, or in some cases nitrous oxid anesthesia, the operative risk can be reduced to a minimum. In 150 consecutive operations, without fatality, many of the patients were in extremely bad condition. With three exceptions, every patient who has appeared for operation has been operated on. The three patients who were refused operation all died medical deaths in periods ranging from twenty-four hours to three weeks of the time when they were seen. Dangers of delay and frequency of recurrence of symptoms in serious form were mentioned.

DISCUSSION

DR. W. W. SKINNER, Geneva: I agree with Dr. Tinker with reference to the surgical treatment of these patients, and I hope he will teach what he has set forth in his paper until physicians cease holding these patients in bondage, allowing destructive changes to go on in the body, as has been shown by microscopic sections, until they are absolutely useless members of the community.

DR. PARKER SYMS, New York: Hyperthyroidism is the real thing we have to consider, and the question which arises in connection with these patients is whether or not they are being poisoned by the internal secretion. Cases of simple goiter of various forms may become the so-called exophthalmic goiter, that is, at some period in their history there may be hyperthyroidism, and it is then that we have these patients presenting a complex line of symptoms from the initial poisoning. It is a poisoning which varies in degree from the mildest disturbance to the most disastrous results. Degeneration takes place throughout the nervous vascular and muscular systems. The important point is that we should recognize this change when it begins; that we should study our patients carefully long before they require operative treatment. My experience has only been with general anesthesia, and I think it has in these cases so many advantages over the disadvantages of local anesthesia that general anesthesia should not be discarded.

DR. E. A. CHASE, Tarrytown: I have had experience with the Beebe serum, and while it has a beneficent influence over cases of exophthalmic goiter in controlling the symptoms, I cannot say that it has ever cured a patient with this disease.

DR. A. L. SORESI, New York: The only contra-indication to local anesthesia in the surgical treatment of cases of exophthalmic goiter must be a more difficult technic and the pain the operator inflicts on the patient.

XUM

DR. G. E. BEILBY, Albany: No one is radical enough to maintain that every case presenting the symptom-complex, more or less complete, of exophthalmic goiter should be operated on. These patients should be placed under observation for two weeks or two months, and then if the symptoms do not improve, operation of some degree should be performed. I believe that local anesthesia is the most important single factor in lowering the death-rate of operations of these cases.

DR. E. M. STANTON, Schenectady: There is no more definite, clean-cut anatomic operation in surgery than the incision of one lobe of the thyroid, and under these conditions of simple goiter there should be practically no mortality. Dr. Tinker has shown that under local anesthesia the mortality following operations on cases of exophthalmic goiter is now exceedingly low.

DR. C H. HACKER, Albany: Excitation is an important etiologic factor and we should avoid it in these cases before and after operation. I see no reason why we should not use general anesthesia in cases of partial thyroidectomy. The results obtained by Ochsner, of Chicago, have convinced me that it is a safe procedure, and in a large series of patients operated on by him, covering a period of two years, there was only one death.

Developmental Defects of the Abdominal Viscera with Their Surgical Significance

DR. W. F. CAMPBELL, Brooklyn: Observation in 500 necropsies, together with clinical experience, have convinced me that many abnormal conditions of the abdominal viscera heretofore regarded as acquired are due to developmental defects and are rationally explained on this basis. In the course of evolution from the quadruped to the biped the long mesenteries of the former have been shortened and eliminated. In the quadruped the abdominal wall acts as a hammock for the viscera; in the biped it acts as a corset. This should be borne in mind in treating enteroptosis. Enteroptosis, nephroptosis and Lane's kink are developmental defects not due to wearing corsets. In the treatment of enteroptosis abdominal supports should be relegated to their proper place and gymnastics should be used to greater extent. Lane's kink is a factor in intestinal stasis, and simulates chronic appendicitis. It should be corrected by surgical procedure.

Malignant Tumors of the Kidney

DR. H. ADSIT, Buffalo: Hypernephroma occurs in from 91 to 97 per cent. of all kidney tumors; it has been a pathologic puzzle. The weight of evidence is in favor of epithelial origin of these tumors and that they are a malignant development of aberrant adrenal tissue. In serial sections of 241 normal kidneys adrenal rests were found in 7 per cent. These growths are not infiltrating. Metastases take place through the veins, seldom through the lymphatics. These tumors vary greatly in rapidity of growth, I have seen them of eleven years' standing; others grow very rapidly. In one case, the tumor weighed 7 pounds at the end of two months. Many cases reported as carcinoma are found to be hypernephromata, or else metastases from a primary cancer elsewhere. It is most frequent between the ages of 40 and 50, although cases have been observed in children.

Auscultation of the Cough

DR. A. H. GARVIN, Ray Brook: Auscultation of the cough offers the best means of diagnosis, and it requires no expensive apparatus or special experience. There are four positions of the cough in respiratory cycle: (1) the cough at the beginning of the inspiration, or at the end of expiration—at this point fleeting râles can be heard, especially in the axillary region; (2) the cough during some phase of inspiration—at this position it gives important information in the advanced stages of tuberculosis; (3) the cough at the zenith of inspiration—this is not to be used, as it obscures the sign; (4) the cough in this position, corresponding to the second position, is during some phase of expiration and frequently reveals abundant râles.

Exophthalmos a Common Symptom of Nephritis

DR. H. C. GORDINIER, Troy: This symptom, in varying degree, is a common sign of chronic nephritis, occurring in nearly one-half of the cases. It is usually associated with hypertension, without enlargement of the thyroid or marked tachycardia. It has been entirely overlooked in text-books, and only within a few years is mentioned in medical literature.

DISCUSSION

DR. L. F. BISHOP, New York: The degree of exophthalmos in Bright's disease varies with the condition of the patient, in that it is more marked when the condition of the patient becomes worse.

The Precancerous Stage

DR. PARKER SYMS, New York: A careful analysis of cases of cancer with a careful retrospection will teach us more systematically just what abnormal conditions and lesions are frequently followed by cancer, and in this way we really will arrive at the most practical knowledge of the etiology of cancer. From a knowledge of the cause of a disease to a knowledge of its proper treatment is a comparatively easy step, and if we properly apply the lessons we have learned we shall be able to prevent, and that is far better than to cure, a large proportion of cancers.

Cancer Immunity in Its Present Status

DR. HARVEY GAYLORD, Buffalo: A small percentage of animals with primary cancers recover, and this is true in a few instances in human beings. This has led to work on immunity. A certain immunity seems to be conferred by inoculating an animal with a growth from a different species. This immunity it has been found is not directed against the cancer cell, but against the growth; it is entirely independent of the cancer cell. From the spindle-cell sarcoma of a rat it has been possible to filter an agent which will produce tumors. One tumor has been thus produced, but it is not a spindle-cell sarcoma, but chondrosarcoma. Sarcoma has been produced in two animals by injection of warm fluid from a cancer of the omentum in a human being. The immunity obtained is specific. The question of vaccination has again arisen, and six cures by this method were reported at the late convention in Paris. In all probability the field for the employment of vaccination will be very limited. Early cases may be amenable. When tumors begin to retrograde it is necessary to remove as much of them as possible. Rats with small tumors have shown a pseudo-Wassermann reaction or deviation of complement reaction. The cases that show improvement give, in course of time, a Wassermann reaction equal to a marked syphilitic reaction. This reaction is a mark of growing immunity. A blood reaction known as the antitryptic reaction gives good indications of the progress of the case and enables one to tell when metastases are occurring.

Treatment of Intestinal Tuberculosis

DR. S. G. GANT, New York: The results are much better from modern treatment than from the older methods, and more favorable results were obtained in cases in which the infection involved the superficial mucosa than in the enteroperitoneal form in which the inner and outer coats of the bowel sooner or later become involved. A large proportion of cures are now being effected by improved surgical technic and with comparatively little danger to the patient. Therapeutic measures employed in the treatment of intestinal tuberculosis may be divided into measures for improving the general health, symptomatic treatment, irrigation with ichthyol, balsam of Peru, boric acid or krameria and soda, 0.5 per cent. alternated daily with high injections of olive oil and bismuth to soothe the bowel; topical applications of silver nitrate, 8 per cent., balsam of Peru or ichthyol 20 per cent. Surgical treatment includes appendicostomy and cecostomy. Cecostomy and use of the enterocolonic irrigator provides a certain means of irrigating both the large and the small intestine separately or together.

The Rôle of Physicians in the Prevention of Insanity

DR. A. W. FERRIS, New York: The cooperation of physicians is especially desired in the efforts to inaugurate psychopathic wards or pavilions, maintained as a part of general medical hospitals, where borderland cases are received for care pending commitment or other disposition, where initial temporary treatment may be given, and where decent hospital accommodation will be substituted for the jail and the lockup. It is a matter of common notoriety that many insane persons are put under arrest and are treated as criminals and thrown into jail along with criminals simply because no adequate provision has been made by either city or county authorities for their care pending commitment. Here lies the physician's opportunity and herein is found his duty. Lives are in jeopardy, the happiness of thousands of families is at stake. Prophylaxis through a concerted effort is the only true economy and the only logical agency at this critical period in the history of our commonwealth.

Chronic Appendicitis

DR. E. M. STANTON, Schenectady, presented a critical study of postoperative end-results, and then drew the following conclusions:

1. In my experience appendiceal dyspepsia has been characterized by symptoms strikingly analogous to the earliest symptoms of acute appendicitis, namely, attacks of epigastric or midabdominal pain or distress, but only rarely accompanied by subjective symptoms, referrable to the region of the appendix. During these attacks the pain or distress is nearly always increased by food intake.
2. Pain confined chiefly to the right lower quadrant and not associated with attacks of epigastric pain and nausea is seldom due to the appendix, and before making a diagnosis of chronic appendicitis in those cases every other possible condition should be excluded.
3. The majority of failures have been in patients complaining of right inguinal pain associated with chronic constipation. At operation these patients have presented an unusually long or dilated cecum, usually accompanied by other evidences of enteroptosis. In the future, a certain proportion of those patients may be cured by some such operation as that advocated by Wilms, but appendectomy alone does not cure.
4. Unless the diagnosis is absolutely certain, the gall-bladder, stomach and right kidney should be explored, and the possibility of a Lane's kink excluded in all patients operated on for chronic appendicitis.

Other Papers Read

The following papers were also read: "The Nervous Woman," by Dr. E. B. Angell, Rochester; "Radiographic Diagnosis of Lesions of the Gastro-Intestinal Tract, with Lantern Slide Demonstration," by Dr. L. G. Cole, New York; "Gunshot Wound of the Abdomen," by Dr. E. A. VanderVeer, Albany; "A New Method of End-to-End Anastomosis," by Dr. A. L. Soresi, New York; "Treatment of Bladder Tumors with the High-Frequency Current of Oudin," by Dr. E. Beer, New York; "The New Thoracic Department of the German Hospital of New York," by W. Meyer, New York; "Deductions from Clinical Experience with Use of a Polyvalent Bacterial Vaccine," by Dr. J. M. Van Cott, Brooklyn; "Clinical Observations of Cardiac Arrhythmias from the Modern Standpoint," by Dr. W. B. James, New York; "Mutual Helpfulness in Conservation of Public Health," by Dr. W. A. Howe, Phelps; "Exactness in Diagnosis of Renal Calculus," by Dr. P. M. Pilcher, Brooklyn; "A Local Hematologic Factor in the Causation of Uterine Hemorrhage," by Dr. A. Sturmdorf, New York.

PHILADELPHIA COUNTY MEDICAL SOCIETY

Meeting held March 22, 1911

The President, DR. C. B. LONGENECKER, in the Chair

SYMPOSIUM ON THE HOSPITAL DISPENSARY ABUSE PROBLEM IN PHILADELPHIA

DR. OSCAR H. ALLIS: The problem is so simple that any physician can solve it; yet simple as it is, it has remained the same after many annual discussions before the various medical societies. Considering the subject chiefly from the standpoint of state appropriations—which are made to our medical college hospitals and dispensaries in return for the enormous amount of charitable work they claim to do—and as this dispensary work must necessarily be extended to those who come on foot, it is obviously unjust to appropriate state funds for purposes which mostly concern the city. If the state would take care of the insane, aged and infirm, and the feeble-minded, and leave the various localities to care for the injured and for transient illnesses, the question of hospital dispensary abuse would resolve itself into the care of the very poor and such as really could not compensate the physician for attendance.

DR. ADDINELL HEWSON: The abuses that occur in hospitals come from a misconception on the part of the public. They feel that because they have paid their taxes they are entitled to receive gratuitous treatment from those connected with hospitals. It seems to me that the remedy must come through the county medical society insisting on investigation of those applying for free treatment. From a personal investigation, I have been surprised to learn the character of many so applying. Some patients had been to Europe several times. Some came to hospitals in carriages but dressed in old clothes, and waited in the dispensary. If investigation were made through some of the bureaus of the city equipped for this work there would be less dispensary abuse and the men living in the neighborhood of the hospitals and not connected with them would have a better opportunity of receiving that to which they are entitled. The institutions themselves ought to be impressed with the idea that as distributors of alms they are guilty of malfeasance in office if they give alms to people unworthy to receive them. I assert that if a patient who is well able to pay for treatment receives such treatment without cost that the managers of the institution are responsible for the wrong distribution of alms in their hands and their action ought to be checked.

DR. AUGUSTUS A. ESHNER: By hospital dispensary abuse I understand the availment gratuitously of medical services in a charitable institution by those able to pay. No doubt a certain measure of such abuse exists, but the extent and degree are somewhat difficult of estimation. In its worst form, it represents a desire to obtain something for nothing; or an endeavor on the part of those in modest circumstances to secure without cost special service that otherwise would be a strain on their resources, if not entirely beyond their means. Physicians' fees differ considerably, and the question arises whether a sick person shall have the privilege of selecting for his treatment the physician of special skill, ability or experience whose fee he may not be able to pay or shall be compelled to submit for treatment to a physician of lesser skill, ability and experience whose fee he can afford to pay. Who shall decide whether a patient can afford to pay for medical services or not; and how much he can pay? It would seem that the patient himself is the best judge, and if he is willing to admit his inability he should receive the benefit of any doubt. Naturally there will be some imposition, but it were better that a few guilty should escape exclusion than that one deserving person should be deprived. The dispensary patient who would deceive in this connection would equally find a way to evade payment of the physician's bill he is compelled to incur. From the practical standpoint the simplest solution of the problem would be to address to every applicant for dispensary treatment the question whether he is or is not able to pay a professional fee. If the answer is in the negative he should be received for treatment, if in the affirmative he should be referred to the physician of his selection.

DR. GEORGE ERETY SHOEMAKER: I have had more experience with this problem in connection with the indoor patient. The question of hospital abuse is complicated by the fact that hospitals have changed in scope, while their attitude toward the patients applying has not changed. No longer only the poor go to the hospitals but all classes. Some of the causes of abuse cannot be controlled; others can be corrected by the checking system. The remedy lies in frank recognition of the fact that hospitals are no longer public charitable institutions, but that all classes are seeking in them treatment; and, in having paid business officials, whose duty it shall be by investigation to weed out such persons as are of sufficiently good financial standing to pay. These individuals should be referred first to their own physicians and second to the younger men working in minor positions in the hospitals. There should be recognition on the part of all concerned that no one group of people is to blame, but that there are many causes at work. Physicians should not recommend for free beds persons whom they do not know. Often the families are able to pay but are not asked.

XUM

DR. J. M. BALDY: In from twenty to twenty-five years in dispensary work in Philadelphia it has been the exception in my experience to find people who were really well able to pay for medical treatment attempting to get something for nothing. A great deal of the dispensary abuse has been due to the physician himself, and to the fact that we live in a teaching center and must have material for teaching. The clinic that uses material in that way is paid in a measure for the so-called abuse. Better abuse than injustice; I would far rather treat a patient who I knew had abused my confidence, than turn away one poor person who needed treatment. The remedy lies with the individual physician. He can ascertain who are worthy without placing the applicants in humiliating positions. There is also a collective way by education of the public to the effect that it puts shame on persons to apply for free treatment if they are able to pay.

DR. JOSEPH D. FARRAR: The abuse of medical charitable service by institutions and the flagrant misuse of this charity for persons and for interests which can have no claim to our free service is such an insult to our self-respect and indignity to our intellect that we are in duty bound to resent it. A stipulated card ought to be filled out for each patient, a carbon copy to be retained by the dispensary, and the card itself sent on the same day to the office of the bureau of investigation, which should be established by the Charity Organization Society. The dispensary should provide itself with the means for the filing of the cards, but the cards themselves should be provided by the bureau of investigation. The original card should be filed with the bureau of investigation; the report of the bureau concerning each patient should be returned to the dispensary in convenient form for filing, with the card for that patient retained by the dispensary at the patient's first visit. Blanks should be filled out, giving name, age, occupation, residence, how long residing there, former address, place of employment, salary, how long in Philadelphia, family physician, physician last consulted. I believe that if we could raise a certain amount in Philadelphia, the Charity Organization Society would be only too glad to establish this bureau of investigation. Chicago is going ahead in this work by subscriptions furnished by physicians.

DR. G. M. ILLMAN: I think, as Dr. Baldy put it, that the trouble is due entirely to the physicians. This is true from many standpoints. Dispensaries are multiplied by the physicians themselves. A physician who has difficulty in getting his patients into the hospitals, becomes disgruntled and opens a house for the treatment of them, and this in time becomes a hospital. Dispensaries are started also by the state for the treatment of special diseases. I believe that the physician who pays state taxes is as much entitled to the facilities of the hospitals in his neighborhood as are the men connected with them. With this idea in mind, I have suggested that it is our duty to cooperate with every man wanting to use the wards of our hospital. In admitting patients for treatment we endeavor first to ascertain the name of their physician, and whether or not the patient is able to pay. We have gotten up a series of letters, one of which is sent to the family physician when the patient is admitted, and another when he is discharged. A similar method is employed in the dispensary. At the top of the dispensary card we have printed: "For the worthy poor." We have found these measures remedial in the question of pauperizing the public.

DR. JOSEPH PRICE: We should recognize the importance of scientific and not political care of worthy charities. Institutions of trust should be used wisely for their specific purposes. The tendency to multiplication of private institutions in the very teeth of old, large, and well-endowed charities emphasizes the fact that there is always something in public charity that snuffs out the scientific and humanitarian spirit and skill that the public demands. I have run a private hospital for more than a quarter of a century. One hundred of my colleagues and intimate friends have done precisely the same thing and attained skill and international prominence for their accomplishments and life-saving efforts. In this state, I have had the opposition of the great commonwealth. In other states such handicap does not prevail. Discrimination should be practiced in all institutions. The family and friends of all employed can easily pay hospital expenses. It would be difficult to determine just what is done with the endowment, the annual donation of the public and the maintenance from the state. One naturally asks what is done with such generous contributions. Private institutions have but one source of revenue and are excessively taxed and assessed.

DR. STEWART C. RUNKLE: There is no question of the existence of hospital dispensary abuse. I believe also that the hospitals and dispensaries are guilty of wrong. Patients are admitted without being asked whether or not they are able to pay. The people who have no business there are the very ones found there day after day, and no effort is made by the attendants to communicate with the family physicians. The little dispensaries, in my opinion, ought to be put out of existence entirely.

DR. HIRAM R. LOUX: Voluntarily, I do not believe that any patient who comes to the dispensary will tell his financial condition. He wants service free of charge if possible. There should be a general bureau of registration in large institutions from which the patients should be distributed to the various departments. No applicant should be treated free who is able to pay his family physician. Then, too, physicians drive patients to the dispensaries by long treatment without results. It is possible that the only effective way to overcome this evil would be through the appointment of a board of charity with sufficient remuneration to pay for the treatment of the poor in institutions.

MR. PORTER R. LEE, General Secretary, Society for Organizing Charity: The chief handicap which the abuse of the free dispensary privilege puts on the work of the Society for Organizing Charity follows from the habit of some of the sick poor going to several different dispensaries at the same time. So far as I have any suggestions to make to-night, I may summarize them as follows:

1. Overlapping in treatment ought to be and can be prevented, by the system of registration which we in cooperation with other city charities have adopted. Each society sends to a registration bureau at stated intervals, preferably every day, either by mail or telephone, a list of the persons who have applied for assistance. In response to this inquiry, the charitable society is given the names of such other charities as have already registered the same persons. The use of geographic areas is another available method of prevention.

2. Investigation of cases is desirable both to expose fraudulent applications and for the more important reason that only so can the dispensary treatment be definitely related to home, industrial and moral conditions which have a bearing.

3. When such investigations reveal conditions requiring relief and special kinds of service for which the hospitals and dispensaries are not equipped, the Society for Organizing Charity will be glad to cooperate in securing it.

4. Social service work as established by several of the Philadelphia hospitals and dispensaries for investigation and social treatment has proved to be a connecting link. The result has been a greatly increased efficiency from our point of view and we have received the testimony of medical men that it is true also from their point of view.

The solution of the problem of dispensary abuse must be largely in the hands of medical men, although it vitally affects the treatment of the poor by charitable societies. Any movement looking to the improvement of work in which we have a common interest will draw our hearty cooperation whenever physicians care to have it.

DR. R. OLIVER KEVIN related a number of incidents illustrative of the deception practiced by persons applying for free treatment at dispensaries. In one instance the patient after receiving treatment directed that a cab be called for her. Another instance was that of a person owning a large number of houses who described how cleverly she dressed up and went to the University of Pennsylvania where she received free treatment.

DR. E. J. G. BEARDSLEY: I have not heard of any hospital trying to stop this evil. I know of only four dispensaries that are actually trying to treat only people who deserve to be

treated in the institutions. One is the Henry Phipps dispensary. Before the physician ever sees the patient, the patient is asked what the income of the family is and it is at once decided whether or not the patient is acceptable for treatment. I never saw a patient admitted who seemed to be able to pay. All the dispensaries run by the State of Pennsylvania ask the same question and with the same results. In the Jefferson medical department we send away from fifty to 250 patients a month who are able to pay. The statements of the patients themselves prove that they are perfectly able to pay a physician. We ascertain the name, address and amount of income of the applicant. A large element of the trouble is the fact that many people outside are treated very badly. The patient receives no examination, no diagnosis is made and he is treated in a most indifferent way. Many of these patients tell, without inquiry, such tales that we treat them at once. In one instance a man with a failing heart was told that he needed *x*-ray treatment, and this was given him—at $5 a "throw." The problem is said to be a hard one. If this is true, it is made so by the physician, continued by the physician, and can be readily stopped by the physician. A hospital that accepts money from the state to take care of poor people should see that poor people are treated. I was interested and gratified in overhearing the remarks of two boys waiting in our dispensary. One had said he did not believe he could wait, when the other boy replied: "You will soon see the feathers and the furs come out."

DR. B. ALEXANDER RANDALL: The dispensary physician or surgeon has a multiple responsibility: his responsibility to the institution, to his fellow practitioners, to his students, to the public, and to the patient, both as a sick person and as a citizen. Many of the public still believe that the hospital and dispensary are provided by the state for the free use of all citizens, just as the public schools are open to all who are not too snobbish to use them, and that they as taxpayers have a right to the services of all medical men in the dispensaries. Mercenary men may strive to use dispensary positions to fill their own offices. Well-meaning physicians will bring to a dispensary surgeon patients for examination whom they state are to be placed in his care as pay-patients. My services having generally been used for teaching, I have made it a rule to examine each patient so as to meet any urgent needs, to use pointedly for teaching purposes the doubtful patients, and only after we had received that much *quid pro quo*, to register the findings and in especial relation to the address given make inquiry concerning the need of charity treatment. After having been given a realizing sense of what charitable treatment is likely to entail, most of the improper cases are ready to consult a physician in his office. One should never volunteer his own address to any but emergency cases requiring treatment between clinic days. While it is often best that the same worker should keep oversight of a patient at the return visits, the chief may discourage the doubtful patients, who wish to have in the clinic the skill of a certain man only, by assigning them to others. They will inquire the address of the man desired and voluntarily consult him.

DR. WILLIAM DUFFIELD ROBINSON: Of the number of people receiving free dispensary treatment fully 10 per cent. could pay the fee that the young doctor is accustomed to receive from people in moderate circumstances. In New York state it is now a statutory crime for one able to pay to take free dispensary treatment from hospitals receiving state aid.

DR. G. G. DAVIS: Among some of the causes of the abuse which exists are the facts that: 1. Physicians are saddled by the public with an unfair proportion of the charitable work in a community. This is shown by the character of the applicants for charitable medical services and by the disapproval which is likely to be visited on a medical officer who refuses applicants his medical services. 2. There is an absence, first, of any standard as to who are unworthy; and, second, of any means of enforcing a standard. 3. By the direct encouragement of the profession, largely due to the expense of apparatus and dressings and to not being qualified in the specialties.

The following remedies are offered: 1. The hospital should maintain an official whose duty it should be to decide as to the claims of the applicant for treatment. It is difficult for the physician in charge to do this. 2. The profession should cease to refer improper cases to the public institutions and should see that the patients have a proper opportunity of securing treatment elsewhere.

DR. JOHN B. ROBERTS: I am of the opinion that persons of moderate circumstances frequent the hospital dispensary: 1. Because many family practitioners are not well posted in modern methods of investigating and treating disease, or are too careless or too lazy to give their patients the benefits of scientific treatment. 2. Because those who are competent to treat the sick, particularly in the specialties, ask fees too high to be paid by patients of the middle class, such as artisans, and self-supporting women. I believe that a graduate, who has tact, energy and medical knowledge and who is willing to work hard and well for his patients, need not fear that mechanics and business people of moderate means will prefer the hospital to him as a medical attendant. The man who is treated for weeks for debility by a doctor who never examines his urine, or for bilious headache by one who never asks about his vision, is apt to obtain better treatment at the hospital dispensary than at the hands of an inefficient medical graduate.

DR. A. B. HIRSH: The statements made here to-night are repetitions of those made in Chicago. The managements of hospitals in Chicago, after acknowledging the abuses, refused to reform their methods. The general practitioners got together and the specialists began to take alarm at the thought of losing valuable consulting practice. The situation was controlled by the general profession paying the expenses of the United Charities in handling the subject. Each dispensary in that city sends each morning to the United Charities a typewritten list of the new patients with their addresses and that body, after going over the catalogue, sends in its report to the institution. We must do that in Philadelphia. Those who expect individual hospitals to do this will be deceived. It must be done by all the hospitals together with the entire medical profession backing up the movement.

DR. HOWARD S. ANDERS: Not many years ago there came to my intimate knowledge the experience of a chief of a medical dispensary who, feeling that loyalty to the profession at large was on a higher plane than loyalty to the institution itself, instructed the attendants to discriminate between those people able to pay and those who were not. After some time this came to the ears of those higher up and he was informed that he must discontinue such discrimination because it would lower the percentage of work done and interfere with a sufficiency of cases for demonstration. This he refused to do and resigned. This is illustrative of one aspect of the question within the medical profession itself and demonstrates institutional vanity for statistics and professorial avidity for cases.

Resolution Adopted

DR. HOWARD S. ANDERS offered the following resolution, which was seconded and carried:

WHEREAS, the results and trend of the symposium discussion on the topic "The Hospital Dispensary Abuse Problem in Philadelphia," indicate sufficiently its vital importance and general medico-sociologic significance as to call for further, broader, and yet more definite and responsible action; be it

Resolved, That a committee of five be appointed to devise ways and means of practically dealing with such abuses as are considered to exist; and to report conclusions and recommendations at the June business meeting of the society.

The following committee was appointed: Dr. Howard S. Anders, chairman; Dr. G. Morton Illman, Dr. Edward J. G. Beardsley, Dr. A. B. Hirsh, Dr. Joseph D. Farrar.

DR. J. CARDEEN COOPER: It does not seem to me that a learned profession should attempt to regulate this matter by appointing a committee. From the general practitioner's standpoint, the abuse does not exist with the hospitals so much as with the general profession. If the committee gives its attention alone to the hospitals the matter is one-sided. As Dr. Roberts has said, people go to hospitals because they receive better treatment, and in many instances they do. Therefore, the matter is in the hands of the general practitioners, and as soon as we become proficient and treat our own patients the hospitals will not make such great inroads on them.

XUM

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Medical Sciences, Philadelphia

May

1 *Anatomic Explanation of the Paralysis of the Left Recurrent Laryngeal Nerve Found in Certain Cases of Mitral Stenosis. G. Fetterolf and G. W. Norris, Philadelphia.
2 *Arneth's Method of Blood Counting—Its Prognostic Value in Pulmonary Tuberculosis. C. L. Minor and P. H. Ringer, Asheville, N. C.
3 Experiences with the Einhorn Duodenal Bucket and a Modified Thread Test. W. G. Morgan, Washington, D. C.
4 Researches in Prophylactic and Anaphylactic Medicine. L. K. Hirshberg, Baltimore.
5 Vaccine Therapy of Pyorrhea Alveolaris. W. R. Williams, New York.
6 Medicinal Treatment in 1,106 Cases of Delirium Tremens. S. W. Ranson and G. D. Scott, Chicago.
7 Cause and Relief of Pain in Duodenal Ulcer. J. T. Pilcher, Brooklyn, N. Y.
8 *Complement-Fixation Test in Diagnosis of Gonococcic Infections. H. J. Schwartz, New York, and A. McNeil, Derby, Conn.
9 *Pulsations in the Peripheral Veins. H. C. Bailey, New York.
10 Diagnosis of Pellagra. H. F. Harris, Atlanta, Ga.
11 Vaccine Therapy and a Simplified Opsonic Index. A. W. Crane, Kalamazoo, Mich.

1. **Mitral Stenosis.**—It is the authors' conviction, based on careful study of the anatomic relations in hardened preparations, that the indirect mechanism may be a variable one, but that when compression is accountable for the recurrent paralysis it must always be caused by the nerve being squeezed between the left pulmonary artery and the aorta or the aortic ligament. Anything which will dilate or force upward the left auricle, the left upper pulmonary vein, or the left pulmonary artery would tend to cause the condition. The anatomic relations are such that direct pressure of any portion of a dilated left auricle on the aortic arch is impossible. Considering the softness of all the structures involved, and the fact that the nerve is normally flattened against the aorta, not rounded, it would seem that its function is abolished, not from actual destruction from pressure, but from a neuritis consequent on a degree of compression which could hardly be sufficient actually to destroy the vitality of the nerve.

2. **Arneth's Method of Blood Counting.**—The authors endorse Arneth's method as having a distinct value in enabling one to estimate the resisting power, and hence the likelihood of recovery and general prognostic outlook in cases of tuberculosis. Arneth considered that young white cells—those with one or two nuclei—are less resistant and less able to combat an infection than the older ones with more nuclei. Starting out with this assumption, he counted the number of nuclei in all the neutrophilic white cells, and divided them into five classes, according to the number of their nuclei. Placing these numbers in a horizontal row, beginning on the left with Class I, which contained one nucleus, and ending on the right with Class V, which contained five nuclei, he formed what he called the neutrophilic blood-picture. From a count of fifteen normal individuals he formed a normal picture. Studying the blood in pulmonary tuberculosis, he found, in consonance with his theory, that the normal percentage of nuclei in the different classes was lost, there being an increase of the younger cells of Classes I and II, and a lessening of the more mature ones in Classes III, IV and V, this being more marked in proportion to the severity of the trouble.

8. **Gonococcus Infections.**—The complement-fixation test as applied to the detection of gonorrhea by Schwartz and McNeil proved of great assistance. They found that the different strains of the gonococcus differ markedly one from another—so much so that the antibodies produced in the body by the toxin of one strain will in many instances not bind complement in the presence of an antigen prepared from another strain. Therefore, if only one strain is used in the preparation of the antigen, a great many negative results will be obtained in positive cases. An antigen prepared from many strains fixes complement whenever one of its component strains does so and, consequently, the necessity of testing a serum against a number of antigens separately is avoided. It is not to be denied that there probably are other strains of gonococci differing widely from any present in the polyvalent antigen, so that at times a negative result will be obtained in a positive case. They believe, however, that working with an antigen composed of many strains, one will obtain a positive reaction in the majority of cases of gonococcus infection, and the use of the polyvalent antigen simplifies the procedure so that it can be of practical value for diagnostic purposes. The facts seem to prove that a positive reaction is an indication of living gonococci somewhere in the body, and if found in men or women supposedly cured of gonorrheal infection in the genito-urinary tract, should be construed to mean that they are still capable of infecting others through sexual intercourse. The importance of this in connection with marriage is self-evident.

9. **Pulsations in the Peripheral Veins.**—That the right heart may produce a pulse wave in the veins of the extremities is shown by Bailey's observations. This pulse wave occurs considerably later than the arterial pulse. He suggests that incompetency of the tricuspid valve may be the cause of varicosities of the veins of the extremities.

New York Medical Journal

April 29

12 Therapeutics of Syphilis. V. C. Pedersen, New York.
13 Present Status of Salvarsan Therapeutics. A. G. Rytina, Baltimore.
14 Dangers and Contra-Indications of Salvarsan. F. Wise, New York.
15 A New Apparatus for Administering Salvarsan Intravenously. E. G. Ballenger, Atlanta, Ga.
16 The Intravenous Injection of Salvarsan. W. R. Thomson, Warsaw, N. Y.
17 Rabies. G. G. Rambaud, New York.
18 Treatment of Hiccup. H. D. King, New Orleans.
19 Uses of the "Cold Cautery," Especially in Dermatology. L. D. Frescoln, Philadelphia.
20 Is Antitetanic Serum a Factor in the Cure of Tetanus? J. C. Kennedy, Brooklyn, N. Y.

Bulletin of the Manila Medical Society

March

21 *Efficacy of the Ipecac Treatment of Dysentery. E. B. Vedder, U. S. Army.

21. **Ipecac Treatment of Dysentery.**—The results of bacteriologic experiments made by Vedder seem to show that 2 per cent. fluid extract of ipecac inhibits the growth of dysentery bacilli, although this is not a specific action, since ipecac also inhibits the growth of bacteria, and other drugs, such as hydrastis and digitalis are quite as powerful as ipecac in inhibiting dysentery bacilli. The *B. dysenteriæ* of the Shiga type that Vedder worked with appears to be more susceptible to the action of ipecac and other drugs than the Flexner strain. The treatment of bacillary dysentery by ipecac is not recommended by Vedder, because, he says, it has not been shown that ipecac possesses any greater activity against dysentery bacilli than many other drugs, and because it would probably be difficult, on account of dilution with intestinal contents, to give sufficient ipecac to make a solution in the intestine as strong as a 2 per cent. solution of the fluid extract, which was the strength used in these experiments. However, since ipecac has been shown to inhibit the growth of dysentery bacilli to some extent, it has probably done patients with bacillary dysentery no harm and, on the other hand, may possibly have accomplished some good, particularly if the dysentery were caused by the Shiga type of *B. dysenteriæ*.

The experiments showed that the action of ipecac on amebas is much more powerful. Amebas in a 5 per cent. bouillon culture were at all times killed by a fluid extract of ipecac in a dilution of 1/50,000, and sometimes killed by even higher dilutions such as 1/200,000. In these experiments two varieties of amebas were used, one isolated from tap water, and one isolated from the stool of a normal man. Vedder was unable positively to identify either culture, but is sure that neither of these varieties was either *Entameba coli* or *Entameba dysenteriæ*. Vedder holds that the ipecac treatment of dysentery caused by protozoa should not on light grounds be set aside in favor of any other, but that in using this treatment great care should be taken to make sure that the dysentery is truly caused by protozoa and is not bacillary, and also to obtain an ipecac that is shown by actual analysis

to contain its proper amount of emetin, and when this is not possible, to insist on obtaining the Brazil root.

Lancet-Clinic, Cincinnati

April 29

22 *Acute Abdominal Manifestations of Syphilis. L. A. Levison, Toledo, Ohio.
23 *A Study of the Tubercle Bacillus Cultivated from Nine Consecutive Cases of Primary Tuberculous Cervical Adenitis. W. Litterer, Nashville, Tenn.
24 The Thyroid Gland. S. P. Beebe, New York.

22. Abstracted in THE JOURNAL, Oct. 1, 1910, p. 1221.

23. Abstracted in THE JOURNAL, Sept. 24, 1910, p. 1135.

Journal of the Arkansas Medical Society, Little Rock

April

25 *An Unusual Case of Appendicitis. C. G. Pettus, El Dorado.
26 Tonsillectomy—Its Indications and Methods. R. H. T. Mann, Texarkana.
27 Cooperation of the Physician and Surgeon in Treatment of Acute Intra-Abdominal Diseases Necessary to Obtain the Best Results. J. P. Runyan, Little Rock.
28 Publicity vs. Quackery and Other Frauds. J. D. Southard, Fort Smith.

25. **Appendicitis.**—In Pettus' case, one of typical appendicitis, a constant pyuria was found to be due to adhesion of the appendix to the ureter and communication between the two.

Virginia Medical Semi-Monthly, Richmond

April 21

29 Nine Cases of Pulmonary Tuberculosis Treated by Compression of the Lung. M. E. Lapham, Highlands, N. C.
30 The Roentgen Ray in Diagnosis of Urinary Calculi. A. L. Gray, Richmond.
31 Clinical Diagnosis of Early Tabes Dorsalis with Negative Wassermann Reaction. T. A. Williams, Washington, D. C.
32 Treatment of Gonorrhea in the Male. J. R. Littlefield, Cumberland, Md.
33 Diagnosis and Treatment of Abdominal Injuries. W. L. Powell, Roanoke.
34 *Medical Treatment of Ingrowing Toe-Nail. S. Harnsberger, Catlett.

34. **Treatment of Ingrowing Toe-Nail.**—Surgical intervention, which is surgical interference, is not considered a treatment for ingrowing toe-nail by Harnsberger. He believes in local treatment. He cleanses the unhealthy soft parts, using, if necessary, some reliable antiseptic solution or soap, with or without a brush, as the case may be. Then, after drying the cleansed parts thoroughly, he applies liquefied phenol (one drop usually) to the most sensitive point and as near the corner of the nail as he can get it. If the toe is well protected by clean gauze, the phenol is used once a day, with or without recleansing, until the soft parts are healed and hardened and the point of the nail is lifted out of the socket it has formed in the flesh. If the phenol does not seem to give satisfactory results, which will seldom happen, or, perhance, fails altogether, then Harnsberger uses the following powder:

℞	Gm. or c.c.	
Thymolis	66	gr. x
Mentholis	66	gr. x
Acidi boracici	4	ʒj
Aluminis q. s.	ad 15	ʒss

The alum should be pulverized finely and dried thoroughly; triturate all and apply freely. In mild cases the powder can be left on until the parts heal. In bad cases the applications may be renewed as thought best. A thin rubber cot should be worn on the affected toe to keep the remedy in place and to protect the parts from possible outside infection. Unless the secretions stain the powder, the applications need not be renewed every day. If it is necessary for the patient to go about, the affected part can be protected by properly applied pieces of thick felt kept in place by adhesive strips. Usually a piece applied to the inner side and top of the toe just back of the painful joint, gives ample protection; and, not only wards off painful pressure of the shoe, but hastens the healing process. Harnsberger has never seen a case so bad that it could not be cured by mild local means.

Philippine Journal of Science, Manila

November

35 Rabies in the Philippines. F. W. Dudley and E. R. Whitmore, Manila.
36 Researches on Acarids Among Lepers. M. Lefebvre, Manila.
37 Occurrence of an Accessory Nasofrontal Duct of the Frontal Sinus. E. Clark, Chicago.
38 Spontaneous Occurrence of Dysentery in Monkeys. F. B. Bowman, Manila.
39 Complement Fixation in Yaws. F. B. Bowman, Manila.
40 Pellagra: Report of a Probable Case in the Philippine Islands. D. G. Willets, Manila.
41 Examinations of Stools and Blood Among the Igorots at Baguio, Philippine Islands. W. P. Chamberlain, H. D. Bloomberger and E. D. Kilbourne, U. S. Army.
42 Unidentified Larvæ of Some Dipterous Insect Developing in the Deep Urethra and Bladder of Man, Producing Severe Abdominal Symptoms. G. P. Trible, U. S. Navy.

Old Dominion Journal of Medicine and Surgery, Richmond, Va.

April

43 Carcinoma of the Breast. W. C. MacCarty and B. C. Willis, Rochester, Minn.
44 *Jaundice in Pernicious Anemia. D. Vanderhoof, Richmond.
45 *Sixty-Six Cases of Pellagra Occurring Outside of Institutions. B. R. Tucker, Richmond.
46 *Early Pulmonary Tuberculosis: Diagnosis without the Use of the Microscope or Stethoscope. N. T. Ennett, Richmond.
47 Pregnancy Following the Complete Removal of One Ovary, and at the Same Time the Major Portion of the Opposite One. J. E. Stokes, Salisbury, N. C.

44. **Jaundice in Pernicious Anemia.**—Vanderhoof reports a case of jaundice associated with weakness. There were no abdominal symptoms or evidence of obstructive lesion of the bile ducts. The blood-picture was typical of Addison's anemia. There was marked improvement of health and disappearance of jaundice under appropriate treatment with arsenic and the institution of proper hygienic measures.

45. **Pellagra.**—A very complete table of these sixty-six cases is offered by Tucker in his paper and also a very good question form which he got up for the Virginia State Board of Health for use in the study of pellagra. Forty-eight of the patients were females and eighteen were males. There were only ten negroes to fifty-six whites. In Tucker's opinion, negroes are less susceptible. Three of the ten negroes were reported to be mulattoes. The hygienic surroundings were poor in only sixteen cases. Ten patients rarely ate corn products and six never ate corn products or had not done so for years. This would seem to eliminate maize as the causative factor in pellagra. In only sixteen cases was the skin lesion the first manifestation. Seventeen patients died during the first attack; seven died the second year, one of these committed suicide. Five patients died after the second year; one died six years after diarrhea and two years after skin lesions. In three the course of the disease was unknown. Total deaths were thirty, a mortality of nearly 50 per cent. All deaths other than the suicide were attributable to the constitutional effects of the disease. Thirty-two of the living patients had one or more remissions. In three, the remission was thought to have lasted over one year. One case is in the first attack. Hexamethylenamin was the exclusive treatment given in fourteen cases in doses of from 20 to 45 grains a day. In seven, immediate improvement was noted, and the patients went into complete remission within four weeks and there was no return. In two, the same result took place, but no report has been received of their condition this year. In two, the hexamethylenamin was advised but the result has not been heard. One patient was given the drug for three days and committed suicide. One case of five years' standing cleared up with hexamethylenamin, except some nervous symptoms and the patient died several months afterward in convulsions but without gastro-intestinal or cutaneous symptoms. In one case hexamethylenamin was given to a patient in a moribund state. He died in a few days.

46. **Early Pulmonary Tuberculosis.**—For diagnostic purposes Ennett emphasizes the importance of the following: The tuberculous patient will usually come to his physician complaining of being "run down," and a careful history will usually reveal many of the following symptoms: He has little or no energy, becomes tired easily, spends restless nights, and may or may not have sweats, has some dyspeptic symptoms or complains of frequent "colds." These colds are usually described as "chest colds" instead of "head colds." He will probably have a slight but constant rise of temperature, usually in the afternoon, rapid pulse, even while at rest, chilly feelings, and possibly some loss of weight. Hypersensitiveness of the entire nervous system; hemoptysis; an occasional, non-productive, hacking cough, accompanied by a tickling sensation in the larynx, usually worse at night on retiring or in the morning on arising; hypersecretion of mucus in the respiratory tract; pain located anywhere in the chest,

XUM

but usually over the apices, and pleurisy are all significant and should be considered carefully.

New Mexico Medical Journal, Las Cruces

April

48 Climate of the Southwest in Relation to Tuberculosis. W. R. Saltzgaber, Alamogordo.
49 Etiology of Rheumatic Fever. W. G. Hope, Albuquerque.
50 Rheumatism. S. G. von Almen.

Pennsylvania Medical Journal, Athens

April

51 *A Plea for the More Intelligent Care of the Pregnant and Lying-In Woman. H. F. Tomb, Johnstown.
52 *The Results of Gall-Stones. J. A. McGlinn, Philadelphia.
53 *Clinical Studies in the Auscultatory Method of Determining Blood-Pressure. E. H. Goodman and A. A. Howell, Philadelphia.
54 *High Arterial Tension. A Clinical and Therapeutic Study. R. M. Goepp, Philadelphia.
55 Diagnosis and Treatment of Relaxed and Weak Feet. C. A. E. Codman, Philadelphia.
56 Recent Advances Made in Syphilis. A. A. Uhle, Philadelphia.
57 Early Ocular Signs of Syphilis. W. Reber, Philadelphia.
58 Ocular Affections in Congenital Syphilis. S. D. Risley, Philadelphia.
59 Aural Manifestations of Syphilis. S. McC. Smith, Philadelphia.
60 Syphilis of the Upper Respiratory Tract. G. C. Stout, Philadelphia.
61 Resection of Pendulous Fat from the Abdominal Wall in Connection with Laparotomy for Other Conditions. B. M. Anspach, Philadelphia.
62 Acute Mania: Its Diagnosis, Prognosis and Treatment. G. W. McCafferty, Philadelphia.

51, 52. Abstracted in THE JOURNAL, Nov. 19, 1910, p. 1838.

53. Abstracted in THE JOURNAL, Oct. 29, 1910, p. 1581.

54. **High Arterial Tension.**—High arterial tension is not in itself regarded by Goepp as an indication for direct corrective treatment by drugs, but as a diagnostic sign of value in a number of morbid conditions characterized by the absorption of toxic substances, poisons or disease products, and in the early stages of chronic interstitial nephritis and general arteriosclerosis. Lowering an excessive blood-pressure below a certain point, which varies for each individual, may be harmful instead of beneficial. While excessive arterial tension (above 180 millimeters of mercury, systolic pressure) is unquestionably an unfavorable prognostic sign, it may be present for years, and is not incompatible with a fair degree of health.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

April

63 The Tuberculosis Sanatorium and What It Stands For. F. M. Pottenger, Monrovia, Cal.
64 High-Potential Electricity in Therapeutics. W. B. Snow, New York.
65 Study of the Backward Child. E. B. McCready, Pittsburg, Pa.
66 Suggestions for the Pharmacopeia. F. P. Morgan, Washington, D. C.
67 Maternal Responsibility and Infant Feeding. H. Lowenburg, Philadelphia.
68 Favus. L. D. Frescoln, Philadelphia.
69 Veratrum Viride in Lobar Pneumonia. T. G. Stephens, Sidney, Iowa.
70 Eligibility of Pension Claimants from the Standpoint of the Ophthalmic Expert. L. W. Fox, Philadelphia.
71 Iodin and Iodin Catgut in Surgery. J. A. McGlinn, Philadelphia.

Journal of Experimental Medicine, Lancaster, Pa.

May

72 Value of Hydrogen Peroxid in the Microchemical Determination of Iron. W. H. Brown, Madison, Wis.
73 *Vaccine Therapy in Prevention of Dysentery in Infants. W. P. Lucas and H. L. Amoss, Boston, Mass.
74 *Characteristics of Growth of Sarcoma and Carcinoma Cultivated in Vitro. R. A. Lambert and F. M. Hanes, New York.
75 *A Study of Cancer Immunity by the Method of Cultivating Tissues Outside the Body. R. A. Lambert and F. M. Hanes, New York.
76 *Studies on Immunity in Cancers of the White Rat. I. Levin and M. J. Sittenfield, New York.
77 Relation of Certain Bacteria to Non-Specific Reactions with the Complement-Fixation Test for Syphilis. C. F. Craig, Washington, D. C.
78 Occurrence of Grouped Isoagglutination in the Lower Animals. R. Ottenberg and S. S. Friedman, New York.
79 Tonicity in Isohemagglutination. M. H. Kahn and R. Ottenberg, New York.
80 Distribution of Solutions in Cardiectomized Frogs. S. J. Meltzer, New York.
81 *Influence of Distilled Water on the Healing of Skin Wounds in the Frog. E. S. Ruth, New York.
82 *The Physicochemical Regulation of the Growth of Tissues. A. Carrel and M. T. Burrows, New York.
83 *Cultivation in Vitro of Malignant Tumors. A. Carrel and M. T. Burrows, New York.
84 Behavior of Bacillus Lepræ in Cold-Blooded Animals. M. Couret, New Orleans.
85 Complementoid and the Resistance of the Mid-Piece of Complement. H. K. Marks, New York.

73. **Prevention of Dysentery in Infants.**—This investigation is very limited and the number of patients treated is few (ninety-five). The vaccine in no instance did harm, and the reactions in the majority were very mild and of short duration. Cases in which bacteriologically *B. dysenteriæ* were proved to be present, but in a clinically unrecognizable form, were not affected differently from those which were culturally negative. This may be due in part to the fact that this mode of vaccination produces an immediate passive immunity, while the bacterial vaccine is producing an active immunity. The work is of interest and holds out a possible means of preventing the great mortality from infantile dysentery during the summer months.

74. **Growth of Sarcoma and Carcinoma in Vitro.**—Lambert and Hanes report that in their experimental work, the transplantable sarcomata of rats and mice were found to grow very readily by the method of cultivating tissues *in vitro*. Sarcomatous tissue grows in conformity to a type which may be regarded as characteristic for tissues of mesenchymal origin. The growth of sarcoma cells *in vitro* consists in ameboid wandering into the surrounding plasma, karyokinetic proliferation, and evidences of active metabolism on the part of the cells. Mouse carcinomata can be cultivated *in vitro*. The outgrowth of carcinoma cells assumes a sheet-like form, only one cell in thickness. They migrate into the plasma by ameboid movement, the advancing edge showing numerous prolongations of the cytoplasm into pseudopods. Karyokinetic figures are frequently seen in growing carcinoma cells. The cells show evidence of active metabolism. Both sarcoma and carcinoma cells cultivated *in vitro* show active phagocytosis; carmin particles placed in the plasma are taken up rapidly by the growing cells.

75. **Cancer Immunity.**—It is said by Lambert and Hanes that sarcoma cultivated in plasma from immune animals grows quite as vigorously as in plasma from normal and tumor-bearing animals, thus affording further proof of the absence of specific cytolytic substances in the body fluids of animals immune to transplantable cancer. Animals may be successfully inoculated with sarcoma cultivated *in vitro*, although, in the case of rat sarcoma, there is evidence of diminished virulence. Subcultures of sarcoma cultivated *in vitro* may be made by transferring to fresh plasma the original piece of tissue, or a portion of the outgrowth. The duration of life of sarcoma cells under these conditions seems dependent only on a renewal of the medium.

76. **Immunity in Cancers of the White Rat.**—Indirect evidence is brought forward by Levin and Sittenfield through their investigation to show that immunity to cancer growth, but not to tumor grafting, is caused not by differences in intracellular nutrition, but by an active inhibitory influence of the organism of the host on the cancer cells. It appears from their experiments that a mouse tumor through a sojourn in the rat reacquires the characteristics of a spontaneous tumor; namely, it takes in a small percentage of inoculated animals, and this percentage increases in subsequent generations. But the diminution of the virulence of the tumor which takes place in the organism of the rat is due to congenital racial immunity of the latter. Furthermore, the immunity of the rat against mouse tumor is not due to conditions of nutrition, but is accompanied by an active noxious influence of the organism of the rat on the mouse tumor.

81. **Healing of Skin Wounds in the Frog.**—Ruth's experiments demonstrate the important point that the healing of epidermal wounds of the frog takes place in a practically identical manner in culture *in vitro* and in the body of the animal. They show further that the rate of growth of new epithelium which constitutes the process of cicatrization is accelerated by a diluted medium, both *in vitro* and *in vivo*. Thus, by increasing or diminishing the degree of dilution of the medium, or by injecting distilled water or hypertonic solutions into the animal, the rate of growth can, and will up to a certain point, be accelerated or retarded.

82. **Physicochemical Regulation of the Growth of Tissues.**—It is concluded by Carrel and Burrows that the degree of dilution of the culture medium has a marked influence on the rate of growth of splenic tissue. The maximum acceleration was obtained in a medium composed of three volumes of normal plasma and two volumes of distilled water. The growth in this hypotonic plasma was very much larger than in normal plasma. On the contrary, the growth of the spleen in hypertonic plasma was always less than in normal plasma. In other experiments, they found that in diluted plasma there was also an acceleration of the growth of the skin, the heart, and the liver of chickens. The skin of adult frogs also grew more actively in this plasma. The optimum degree of dilution varied according to the nature of the tissues and to the species of the animals. While the plasma containing two-fifths distilled water produced the largest growth of splenic tissue, a slightly less diluted medium was more favorable for the liver and the heart, and generally for the skin also.

83. **Cultivation in Vitro of Malignant Tumors.**—Experimental malignant tumors were found to grow *in vitro* extensively, and the cultivation of human tumors is also possible, although much more difficult on account of the liquefaction of the plasma.

Wisconsin Medical Journal, Milwaukee

April

86 *Prevention and Treatment of Septic Infections of the Extremities. E. H. Ochsner, Chicago.
87 Early Diagnosis of Cancer. F. G. Connell, Oshkosh.
88 Case of Lithopedion. M. M. Spitz, Milwaukee.
89 Diet and General Management of Typhoid. L. M. Warfield, Milwaukee.
90 *Traumatic Hernia. J. F. Pember and T. W. Nuzum, Janesville.

86. Abstracted in THE JOURNAL, Nov. 5, 1910, p. 1678.

90. Abstracted in THE JOURNAL, July 23, 1910, p. 344.

Military Surgeon, Washington, D. C.

May

91 An Outline of the Organization of the Medical Department of the Japanese Navy. E. S. Bogert, U. S. Navy.
92 Experience of the Army with Vaccination as a Prophylactic Against Small-Pox. J. V. Hoff, U. S. Army.
93 Natural Immunizations versus Artificial Vaccine Therapy. H. Shoemaker, N. G. Pennsylvania.
94 *Disappearance of Beriberi from the Philippine (Native) Scouts. W. P. Chamberlain, U. S. Army.
95 Service at Minnesota Forest Fires of 1910. H. L. Lamb, N. G. Minnesota.
96 *Protection from Typhoid by Inoculation. W. J. L. Lyster, U. S. Army.
97 Hospital Corps Instruction on Board Ship. W. S. Pugh, U. S. Navy.

94. **Disappearance of Beriberi from Philippine Scouts.**—Chamberlain shows that beriberi has disappeared from the Philippine (native) scout organizations during the last half of the year 1910. There have been no sanitary improvements to account for this, except the changes in diet, and there has been no corresponding decrease in the admission rate for diseases other than beriberi. There was no corresponding decrease in the incidence of beriberi in the general Filipino population or in the Philippine (native) constabulary. The decrease in admissions for beriberi among the scouts was clearly marked for four months before the use of undermilled rice began. The decrease in admissions was well under way before the mongos, camotes and ginger root of the new ration began to be issued. The decrease in the admissions for beriberi was due either to unknown causes acting coincidently with a reduction in the amount of rice used and the addition of a legumen, or was due directly to these dietetic changes. As no other reduction in admissions even approaching that of 1910 has occurred since the organization of the scouts in 1901, the authors do not believe that the present decrease is due to coincidence. The facts do not oppose the polished rice theory of beriberi production. On the contrary Chamberlain believes that they support it.

96. **Protection from Typhoid by Inoculation.**—Lyster details the experience of inoculating an entire regiment in order to prevent the spread of typhoid. After the completion of the inoculation of the regiment (376) and nearly seventy civilians at the post, including the teamsters, no new cases appeared. Later this regiment, except one troop, left post on a twenty-one day march, some 300 miles. On the return of the command, after spending twenty-one days in a country where typhoid is known practically throughout the year, and having lived under war conditions, the sick report is stated by the commanding officer to be *nil*. No subsequent cases of typhoid developed.

Ophthalmic Record, Chicago

April

98 Toxic Paralysis of Accommodation. H. F. Hansell, Philadelphia.
99 Ocular Affections in Congenital Syphilis. S. D. Risley, Philadelphia.

New Orleans Medical and Surgical Journal

May

100 *Malignancy in Tumors. F. B. Gurd, New Orleans.
101 Two Cases of Cirrhosis of the Liver Operated on by Narath's Procedure. E. D. Martin, New Orleans.
102 *Ingrown or Overgrown Toe-Nail. H. B. Gessner, New Orleans.
103 Tumors of the Lung. W. H. Harris, New Orleans.
104 Copper Salts and Ipecacuanha in Amebic Colitis. J. A. Storck, New Orleans.

100. **Malignancy in Tumors.**—Special emphasis is placed by Gurd on the relative malignancy in tumors, and the changes which take place in certain new growths of apparently benign type, but in which malignant characteristics develop. Such conditions, he says, are usually loosely and falsely grouped under the heading of malignant degenerations.

102. **Ingrown or Overgrown Toe-Nail.**—Gessner proposes a modification of the Van Meter incision, consisting in the substitution of a hexagon for the diamond excision. The edge of the nail is paralleled by a cut running its full length, about ¼ of an inch from it. From ¼ to ½ of an inch further from the nail another cut is made, parallel with the first and equally long. A V-shaped incision joins the first two cuts at each end and completes the hexagon. The removal of the skin and fascia between these lines of incision leaves a gap, suture of whose edges pulls the skin away from the nail edge evenly throughout its entire extent.

Detroit Medical Journal

April

105 Acute Postoperative Paresis. J. A. McMillan, Detroit.
106 Facial Paralysis. W. A. Potter, Detroit.

Medical Fortnightly, St. Louis

April 25

107 *Mattoids (Cranks). A. Macdonald, Washington, D. C.
108 Gases in Their Relation to the Body. A. L. Benedict, Buffalo, N. Y.
109 In the Twilight. C. E. Warren, North Easton, Mass.

107. **Mattoids.**—This is the term which MacDonald proposes for the word "cranks." He says that the word crank has been so misused, if not abused, that the term "mattoid" is preferable. The mattoid, then, is an abnormal person, characterized by want of balance, eccentricity or egotism. He is uusally sincere and insists on his ideas, which are generally extreme and frequently absurd. He is generally sane, but may be semi-insane, and sometimes insane. He is usually above the average, sometimes showing talent, but rarely genius. He often has a distorted view of life, leading him into all kinds of uncertainties, inconsistencies and vagaries and he is frequently called odd, queer, strange, freakish and the like. Mattoids show defects and disproportion in character indicating as much talent in one direction as they do little in another. There is often a nervous element which gives force and energy. They may be gifted in speech, art and poetry, but deficient in judgment, showing no continuity and unity of direction in their lives. They often have altruistic but wild theories, utopian ideas or absurd projects, which they express in public speeches or books. But they are generally incapable of accomplishing anything. The mattoid may pass from one mental condition to another, and in the course of his life manifest all of the characteristics mentioned above. He is often on the borderline between sanity and insanity. He is more liable to get into trouble, commit crime or become insane than people in general.

XUM

American Medicine, New York

April

110 Selection of Patients for a Tuberculosis Sanatorium. C. B. Slade, New York.
111 Medicine and Character. S. H. Brown, Philadelphia.
112 Neurasthenia Gastrica (Nervous Dyspepsias of Loube). A. A. Robinson, Ogden, Utah.
113 Pathology of Anemia. W. H. Boese, New York.
114 Sir Walter Raleigh's Royal Cordial. J. Knott, Edinburgh, Scotland.
115 Twice Wounded by Rattlesnakes; Recovery. H. Crutcher, Roswell, N. M.

Boston Medical and Surgical Journal

May 4

116 School Inspection in Small Towns. A. T. Cabot, Boston.
117 *Difficulties and Limitations of Diagnosis in Advanced Cases of Renal Tuberculosis. H. Cabot, Boston.
118 An Analysis of Forty-Six Cases of Prostatectomy. L. Davis, Boston.
119 Five Successive Cesarean Sections on the Same Woman, the Fifth on Twins. C. M. Green, Boston.
120 A Summer Service in the Weld Ward of the Massachusetts General Hospital. C. J. White, Boston.

117. **Renal Tuberculosis.**—In the light of recent experience with spinal anesthesia in cases of damaged kidneys, Cabot is inclined to regard this as the anesthesia of election, at least for the exploratory part of the operation. Anesthesia extending well up to the costal margin is readily obtained and is entirely satisfactory for the exposure and opening of the ureters. The urine can then be collected and conclusions drawn without subjecting the patient to the strain of general anesthesia. Should nephrectomy be decided on, it may either be done at once under a general anesthetic, or postponed to a future occasion. Cabot has not found spinal anesthesia satisfactory for nephrectomy and does not advise its use, but for the preliminary determination of the kidney function, he believes it will lower the mortality in properly selected cases.

Journal of Cutaneous Diseases, New York

May

121 Acrodermatitis Chronica Atrophicans and Diffuse Scleroderma with Associated Morphea Atrophica. K. Herxheimer and W. Schmidt.
122 Historical Sketch of Leprosy in the United States. S. Pollitzer, New York.
123 The Sociologic Aspects of Leprosy and the Question of Segregation. I. Dyer, New Orleans.
124 *Experimental Leprosy and Its Bearing on Serotherapy. C. W. Duval and F. B. Gurd, New Orleans.
125 Widespread Lupus Erythematosus with Associated Papulo-Necrotic Tuberculide (?). U. J. Wile, New York.

124. A similar article by the same authors was published in the *Archives of Internal Medicine*, February, 1911, and abstracted in THE JOURNAL, March 25, 1911, p. 925.

Archives of Ophthalmology, New Rochelle, N. Y.

May

126 Dacryocysto-Rhinostomia (Toti's Operation). E. Török, New York.
127 Indications for Operation in Heterophoria and Squint. A. Duane, New York.
128 A Case of Floating "Soemmering's Crystalline Mass" in the Vitreous. K. Wessely, Wuerzburg.
129 Action of Salvarsan on the Eye. F. J. Flemming, Berlin.
130 Salvarsan in Ophthalmology. O. Schnaudigel, Frankfort a.-M., Germany.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

April 22

1 The Kinks which Develop in Our Drainage System in Chronic Intestinal Stasis. W. A. Lane.
2 Chronic Intestinal Stasis Treated by Short-Circuiting or Colectomy. H. Chapple.
3 Arteriosclerosis and the Kidneys. Sir C. Allbutt.
4 Interdependence of the Circulatory and Respiratory Systems. I. McKenzie.
5 Hepatic Distomiasis (Sheep Rot) in Man. G. R. Ward.

Lancet, London

April 22

6 *Sensibility of the Alimentary Canal in Health and Disease. A. F. Hertz.
7 The Declining Birth-Rate. F. E. Fremantle.
8 *Railway Accidents with Special Reference to Cerebral Fat Embolism. R. J. Godlee and G. E. O. Williams.
9 Ocular and Visual Conditions in Medical Cases. J. Taylor.
10 *Direct Bronchoscopy. H. Tilley.
11 *Value of Ionization in Inflammatory Diseases of the Lower Bowel. J. C. Webb.
12 *Ascites Treated by Lymphangioplasty. R. A. Stoney and T. G. Moorhead
13 Measles: Its Treatment and Prevention.
14 *Acute Hemorrhagic Pancreatitis; Operation; Recovery. E. Gillespie.
15 Case of Pericarditis (Tuberculous) with Effusion. J. Rae.

6. **The Alimentary Canal in Health and Disease.**—The results of his experiments, made to determine the sensibility of the esophagus, stomach and intestines to tactile, thermal and chemical stimulation, are detailed by Hertz. He says that the alimentary canal from the commencement of the esophagus to the junction of the rectum with the anal canal is completely insensitive to tactile stimulation. The introduction of ice-cold water or hot water at any temperature between 40 and 50 C. into a normal stomach produced no sensation of any sort. His observations show that 0.4 and 0.5 per cent. hydrochloric acid, introduced into the esophagus or the empty stomach of normal individuals through a tube, produces no sensation of any kind. The introduction of 0.5 per cent. hydrochloric acid through the gastrostomy wound into the stomach of patients with esophageal stenosis also produces no sensation. It is thus clear that the pain, which is often associated with excess of free hydrochloric acid in the stomach, cannot be due, as has generally been believed, to the excess of hydrochloric acid alone, as it is certain that as much as 0.5 per cent. free hydrochloric acid is never present in the stomach. Moreover, many cases in which excess of free and of active hydrochloric acid is discovered by chemical analysis are not associated with pain or other gastric symptoms, and the excess present in painful conditions may persist after the pain has been completely relieved by treatment. It may be concluded, therefore, that the presence of an excessive quantity of hydrochloric acid in the stomach is only one manifestation of a disease, in which pain is another, and that it is not the cause of the pain. In six cases of gastric ulcer, in all of which the diagnosis was confirmed by operation, 4 ounces of 0.5 per cent. hydrochloric acid introduced into the empty stomach by a tube produced no sensation whatever. The same result was obtained in another case in which a mixture of hydrochloric acid with pepsin was used. These observations show that, contrary to the common belief, contact with free hydrochloric acid is not the direct cause of the pain in gastric and duodenal ulcer. That the acid is, however, in some way connected with the production of the pain there can be no doubt, as rapid relief always follows the administration of an alkali.

Crême de menthe, introduced by a tube into the empty stomach, gives rise to a sensation of warmth which may occur immediately, but more frequently only develops in the course of a minute or two. A similar result was obtained with the 48 per cent. alcohol, but not with peppermint water, so that it is the alcohol and not the peppermint which produces the sensation after the liquor is introduced into the stomach. Crême de menthe also produces an immediate burning sensation in the epigastrium when poured through a tube into the lower end of the esophagus. This is a much stronger sensation than that produced in the stomach, but it is impossible to distinguish the locality of the two. The burning sensation in the esophagus is produced by the alcohol, as the 48 per cent. solution has the same effect, while the peppermint water, if warmed to the body temperature, produces no sensation. It may be concluded, therefore, that the immediate burning sensation produced by the liquor is in the esophagus, and that the subsequent feeling of warmth is in the stomach. Both are due to the alcohol alone. It was found that the lower end of the esophagus is so sensitive to alcohol that special precautions had to be taken in testing the sensibility of the stomach in order to prevent a few drops reaching it when the tube was withdrawn. Alcohol in a strength greater than 25 per cent. gives rise to a sensation of burning when applied to the mucous membrane of the anal canal, but when introduced into the pelvic colon through a sigmoidoscope or into the more proximal parts through a colostomy opening, a strength of 50 or even 90 per cent. is required. After a sensation of heat has been produced, the repetition of the experiment a few minutes later may have no effect, owing to the protection of the mucous membrane by mucus, which is secreted as a result of the irritation caused by the alcohol. Glycerin produces no

sensation when applied to the rectal mucous membrane; the characteristic sensation occurs only when it is applied to the anal canal. The sensation produced by a glycerin enema or suppository must, therefore, be due to a small quantity escaping from the rectum into the anal canal, and the defecation reflex to which it gives rise probably originates in the anal canal, and not, as formerly believed, in the rectum.

8. **Railway Accidents.**—Two cases of cerebral fat embolism are reported by Godlee and Williams. Both patients presented similar symptoms and signs. They both had fractures of the thigh, in one case a comparatively simple fracture, and in the other two simple fractures, together with some crushing of the bones about the knee-joint and a lacerated and contused wound of the foot. The patients were both given chloroform for the setting of the fractures. Within about twelve hours both went into a comatose state more or less suddenly, without any previous noticeable pulmonary distress, the temperature rose rapidly, the pulse was of low tension and rapid, and there were no localizing signs in the nervous system pointing to a lesion in any particular part of the brain. Both might have been thought to be cases of cerebral compression if it had not been for the character of the pulse. One patient was trephined over the right side because he had evidence of injury to the skull on that side. The authors do not believe that the operation hastened death, the only cause of which that could be demonstrated was fat embolism of the brain. The other patient recovered to a slight extent from what seemed to be an almost hopeless condition, and his death was no doubt partly due to a secondary bronchopneumonia; in this case also some of the typical signs of cerebral compression were absent.

Attention is called to three points of especial interest. 1. The difference in the extent of the original injury in the two cases. Whereas one might have expected fat embolism to occur in the case where there were several fractures, some of which were of a crushing nature, there was nothing about the simple fracture in the other case to suggest the likelihood of its occurrence, or at all events of its causing any grave symptoms. 2. The absence of dyspnea or other symptoms of pulmonary embolism in one case, and the fact that the other patient only complained that his bandages felt tight. 3. The resemblance superficially of the condition to that of cerebral compression; the characteristic pulse of compression was never observed. There were never any signs in the nervous system pointing to a localized injury to the brain.

10. **Direct Bronchoscopy.**—Two cases are cited by Tilley, indicating the value of this method for the detection and removal of foreign bodies impacted in the lower air passages.

11. **Ionization in Inflammatory Diseases of Lower Bowel.**—Webb details his results obtained in the treatment of colitis by the ionization of zinc salts in the bowel. Of fourteen patients so treated, only one was not cured or benefited.

12. **Ascites Treated by Lymphangioplasty.**—In the case reported by Stoney and Moorhead, the introduction of artificial silk lymphatics, according to the method suggested by Sampson Handley in 1910, was followed by disappearance of the ascitic fluid. The existence of chronic fibrous peritonitis with hepatic cirrhosis was demonstrated at the operation. The authors do not claim that the improvement which occurred is necessarily the result of the lymphangioplasty, as ascites of the type here presented may disappear spontaneously (as occurred for a time in this case during the first stay in the hospital), or may disappear after a simple laparotomy. The fact, however, that some fluid reaccumulated after the operation suggests that the mere laparotomy was not of itself the cause of the later improvement, but rather that the reaccumulation took place prior to the establishment of an efficient circulation via the silk lymphatics, and that once a sufficient circulation was attained no further transudation accumulated.

14. **Acute Hemorrhagic Pancreatitis.**—The case reported by Gillespie shows the features which have been well termed "an abdominal catastrophe." There was a confused picture of shock and of hemorrhage, so much so that but for the localization of the pain to the upper abdomen and the history of regular menstruation, the diagnosis would have been that of a ruptured extra-uterine pregnancy. Rigidity of the recti was present, but it was neither so marked as in cases of perforation, nor so well defined as has been insisted on by other observers. There was nothing which could be called distention, but it is of interest to note that diminution of liver dulness was present. The onset was definitely gradual; the pain increased in intensity until it was so severe as to attract attention. No light is thrown on the obscure question of causation. The abdomen was opened above the umbilicus by a vertical incision, and separation of the fibers of the left rectus. The lesser sac was at once seen to be filled with dark blood. No fat necrosis was observed. The gastrohepatic omentum was freely opened and the blood was evacuated. The peritoneum over the pancreas was freely torn and more blood removed. The lobules of the pancreas showed up a light yellow against the effused blood. The gall-bladder and the bile passages were palpated but nothing abnormal was found. The patient's condition was so serious that no further examination was attempted. Gauze was passed down to the pancreas and packed along it from tip to head. A rubber tube was also passed down beside the emerging piece of gauze. The abdomen was closed in a single layer.

Clinical Journal, London

April 19

16 Treatment of Nephritis. F. J. Smith.
17 Clinical History and Treatment of the Less Obvious Types of Gummata. H. Curtis.

British Journal of Children's Diseases, London

April

18 *The Oculo-Motor Type of Polioencephalitis. S. Stephenson.
19 Chronic Lung Affections in Children. J. E. H. Sawyer.
20 Hydatid Cysts of the Liver in a Boy; Operation. A. J. Cleveland and J. Burfield.

18. **Oculomotor Type of Polioencephalitis.**—For some years Stephenson has observed a group of cases in children, the chief characteristic of which is the sudden onset of strabismus at an age when ordinary squint is not altogether common. The cases are encountered in children often of tender age. The condition may arise without obvious cause. On the other hand, it may be observed after some childish ailment, as scarlet fever or measles, or an injury, a fright, or some trifling operation, as vaccination or circumcision. The child, often apparently in usual health, is put to bed, and on awakening next morning is found to present squint. Stephenson's observations lead him to conclude that the oculomotor symptoms in these cases depend on an acute focal encephalitis, quite analogous with the better-known forms of that disease. He has seen twenty-eight such cases, all the patients being under 6 years of age, and half of the number under 1 year. The condition was associated comparatively seldom with other symptoms indicative of a cerebral disorder. Zymotic diseases (measles, 2; scarlet fever, 1; influenza, 1; small-pox, 1; pertussis, 1) appeared to be important factors in its causation. Although the paralysis may affect any of the extrinsic muscles of the eyeball, yet in three-fourths of the cases, the external rectus muscle alone is involved. The extrinsic musculature of the eye is seldom attacked. Stephenson says that the common form of encephalic strabismus is very apt to be confused with ordinary concomitant convergent strabismus.

Medical Press and Circular, London

April 19

21 Etiology and Incidence of Heart Disease in Regard to Prognosis. W. E. Wynter.
22 Alcohol and Insanity. F. W. Mott.
23 Postyén, a Thermal Bath for Rheumatism and Gout. A. Erdos.
24 Tuberculous Meningitis in New-Born Infants—the Somnolent Form. M. Lafarcinade.

Archives des Maladies du Cœur, etc., Paris

April, IV, No. 4, pp. 209-272

25 The Heart Rhythm and Hyperpnea. (Pseudo-bradycardie hyperpnéique par rhythme couplé.) L. Gallavardin.
26 The Large Mononuclear Cells in the Blood. (Le grand mononucléaire du sang.) A. Coic.

Bulletin de l'Académie de Médecine, Paris

April 4, LXXV, No. 14, pp. 463-476

27 Curable Myocarditis. (Les myocardites atténuées et curables.) C. Flessinger.

XUM

Presse Médicale, Paris

April 8, XIX, No. 28, pp. 277-292

28 *Treatment of Enlarged Tonsils. (Amygdalectomie.) G. Mahu.
29 *Acidosis and Diabetic Coma. M. Labbé and L. Violle.

April 12, No. 29, pp. 293-300

30 Hemolytic Jaundice. (L'ictère par hémolyse.) Debove.
31 Wire Netting to Strengthen Casts. (Emploi de la toile métallique moulée et enrobée dans l'exécution des appareils d'immobilisation.) R. Danis.

the organism with acids. None of the mineral acids induced with thirty-six illustrations.

29. **Acid Intoxication and Diabetes.**—Considerable experimental investigation by Labbé and Violle has led to results confirming the assumption of the acidosis as the main factor in diabetic coma, but the special toxicity of the acids in question evidently adds to the injurious effects of the flooding of the organism with acids. None of the mineral acids induced any tendency to coma in the animals, but the organic acids, such as butyric, lactic, propionic and beta-butyric acids all had marked though variable power to induce coma. The acids free from a secondary alcoholic action, such as butyric and propionic acids, displayed the most powerful coma-producing action. The research confirms the importance of alkaline treatment of diabetic coma and in prophylaxis.

Semaine Médicale, Paris

April 19, XXXI, No. 16, pp. 181-192

32 *Test of Kidney Functioning by Comparison of Urea Content of Blood and Urine. L. Ambard and O. Moreno.

32. **Test of Kidney Functioning by Comparison of Urea Content of Blood and Urine.**—Ambard and Moreno present a formula based on the proportion of urea in the blood, the proportion of urea eliminated in the urine, the body weight, and the concentration of the urine as an index of kidney sufficiency.

Archiv für Gynaekologie, Berlin

XCIII, No. 3, pp. 413-676. Last indexed April 22, p. 1231

33 *Operative Treatment of Inflammatory Disease of Ovaries, Tubes or Pelvic Connective Tissue. (Die entzündlichen Adnex- und Beckenbindegewebserkrankungen.) H. Thaler.
34 *Sarcoma of Female Urethra. O. Nebesky.
35 *Intermenstruation Colic. (Zur Pathologie und Therapie des sogen. Mittelschmerzes.) A. Theilhaber
36 *Experimental Research on Measures to Protect Against Peritoneal Infection. O. Hoehne.
37 Cysts in the Uterus. O. Frankl.
38 Adenomyoma of the Ligament of the Ovary. O. Frankl.

33. **Inflammatory Disease in the Pelvis.**—Thaler reviews the experiences at Schauta's clinic in Vienna with 6,000 cases of inflammatory processes around the uterus. Operative treatment is indicated, he says, only after failure of a course of conservative treatment, except where pus has to be let out. When operative measures become necessary, extirpation of the organ involved is necessary; palliative measures are useless. The appendix should be removed on suspicion of trouble or adhesion to the inflammatory process elsewhere. The radical operations alone result in permanent cures; whenever conditions require draining, any conservative operation, leaving the uterus, is distinctly contra-indicated, as also when there is a tendency to excessive genital hemorrhage. Over 93.5 per cent. of the 828 patients given radical operative treatment were permanently cured, and the symptoms of the premature menopause were annoying in only a few cases. The only exception to the rule for radical operative treatment is in case of tuberculosis of the genital organs. Only five of the sixteen patients with tuberculosis of an ovary or tube were permanently benefited by the radical operation and the post-operative mortality was 25 per cent. In the experience of the last sixteen years not a single case has been encountered of a primary ascending tuberculous process in the internal genitals. In 40 of the total 6,179 cases the inflammatory process in the adnexa was evidently secondary to an extra-uterine pregnancy.

34. **Sarcoma in Female Urethra.**—Nebesky adds another to the fourteen cases on record, and states that four of the total fifteen were free from recurrence at last accounts. The interval since the operation is nine years in his case; the patient is a farmer's wife, now 48 years old. In two cases an existing pregnancy was apparently not disturbed by the operation. Flatau provided for comparative continence of urine by suturing the neck of the bladder in the vagina which is kept packed with gauze. Nebesky sutured the stump of the urethra to the vulva.

35. **Menstrual Pains Between the Periods.**—Theilhaber ascribes the pains to spasmodic contraction of the musculature of the uterus, similar to spasm of the cardia and pylorus. Treatment on this basis has always proved effectual in his experience, that is, by enlarging the internal os. It is not enough merely to dilate it; a permanent cure is ensured only by slitting the os, or, better yet, resecting a small strip. He has done this in 100 cases of dysmenorrhea in the last twelve years and 66 per cent. of the patients were entirely cured and 14 per cent. were much improved. In the others who were not benefited, the trouble must have been more of a hysteric nature. Success was constant in the five intermenstrual colic cases in which he has applied this same measure.

36. **Protection of Peritoneum Against Infection.**—Hoehne reports experiments on four guinea-pigs and eighty-five rabbits which confirm the fact of a reactive inflammation in the peritoneum after injection of oil or other irritating substance. When this peritonitis is of only a few hours' standing, it favors absorption of germs by the peritoneum, but if it is of twenty-four hours' or a few days' standing it checks absorption from the abdominal cavity very materially or prevents it altogether for many days and weeks. Germs thus vegetating in the abdominal cavity and not able to pass thence into the general circulation, rapidly die off, even the most virulent, in the course of four days. The peritonitis once installed summons to the region such powerful bactericidal forces that the invading infectious germs are soon conquered. Small intraperitoneal injections of olive oil, sesame oil or camphorated oil, up to 10 c.c. proved entirely harmless for the rabbits, while larger amounts, 20, 50 or 100 c.c. sometimes induced fat embolism in the lungs or severe local or general injury.

Correspondenz-Blatt für Schweizer Aerzte, Basel

April 10, XLI, No. 11, pp. 385-416

39 *Injection and Infiltration Treatment of Sciatica. F. Barth.

39. **Sciatica.**—Barth reviews the modern methods of treating sciatica and their results, preferring, himself, a combination of the Hay and Alexander technics, that is, injection of 10 c.c. of physiologic salt solution in the nerve at a point between the tuberosity of the ischium and the greater trochanter, or at some point where the sciatic is most sensitive, supplementing this with bloodless stretching of the nerve. The main point is a correct diagnosis. Only with sciatica does pain occur as the patient strains the abdominal muscles; if there is pain in the calf or buttocks as the patient coughs or sneezes, sciatica may be regarded as certain. Another sign is a tendency to lordosis in the lumbar vertebræ as the trunk is bent forward, but no tendency to lordosis otherwise. The patient instinctively resists the tendency to straighten the spine as liable to induce pain. A still more important sign of sciatica is the loss of the Achilles reflex. The knee-jerk is not affected by sciatica.

Deutsche medizinische Wochenschrift, Berlin

April 13, XXXVII, No. 15, pp. 673-720

40 *Significance for Diagnosis and Prognosis of Leukocytosis with Inflammation. (Bedeutung der entzündlichen Leukozytose.) Sonnenberg, E. Grawitz and K. Franz.
41 Syphilis in Rabbits After Intracardial Inoculation. (Syphilitische Allgemeinerkrankung beim Kaninchen durch intrakardiale Kulturimpfung.) H. Sowade.
42 The So-Called Paradoxic Wassermann Reaction. C. Rasp and E. Sonntag.
43 Chemical Identity of Antibody Production with Cell Degeneration. (Chemische Identität der Antikörperbildung mit der Zelldegeneration.) R. Waldvogel.
44 Preventive Antiplague Vaccination. (Ueber die Bereitung von Impfstoff der "Deutschen Pestkommission 1899" zu Massenimpfungen bei Gefahr der Annäherung einer Lungenpestepidemie im Jahre 1911.) Martini.
45 *Salvarsan in Eye Disease. (Salvarsan bei Augenhintergrundleiden.) M. Falta.
46 Tin Poisoning. (Ueber Zinnvergiftung.) T. Günther.

40. **Leukocytosis in Diagnosis and Prognosis.**—Sonnenburg declares that physicians should adopt the leukocyte count as a routine measure. He applies to it what was said forty years ago in regard to the importance of taking the tempera-

ture, insisting that it is equally indispensable "because every phenomenon taking place in the diseased body should be studied; because it can be studied with a precision obtainable with few of the other phenomena; because it can be neither simulated nor concealed; because any deviation from normal findings indicates disturbance; because it reveals the success of therapeutic measures and warns of injurious influences, and is an index of the transition from one stage of the disease into another, and, finally, because it often announces the impossibility of recovery." These statements, made originally in regard to the clinical thermometer, are equally true, he says, of the leukocyte count and the neurophil blood-picture. It is a great advantage to know the leukocyte count; how the physician interprets the blood findings for diagnosis and prognosis in the individual case is his affair, but he should not neglect this valuable aid.

To show its importance, Sonnenburg reports ten typical cases of appendicitis, as the peritoneum reacts more readily and more intensely, perhaps, to inflammation than other organs. A leukocyte count of 20,000 and "Arneth" 20 per cent. in one case paralleled the acute appendicitis with gangrene, mild infection, good resisting powers and favorable prognosis, while in another case the leukocyte count of 15,000, Arneth 47 per cent., indicated severe infection, and the child died as the Arneth rose to 66 per cent. In another case the clinical picture was mild but the leukocyte count was 30,000, Arneth 6 per cent. Operation was done in this case on the leukocyte count alone, and the findings confirmed the grave danger of delay. In another case the clinical manifestations were serious but the leukocyte count was only 9,000 and the Arneth 12 per cent. The appendix had perforated, but the pus was completely encapsulated. [The Arneth formula has been described in THE JOURNAL, Dec. 25, 1909, page 2180, and an improved technic was given Jan. 8, 1910, page 124].

Grawitz' experimental research has confirmed the fact that muscular strain will raise the leukocyte count. This explains the leukocytosis of from 20,000 to 30,000 found sometimes with normal deliveries—the result merely of the violent muscular contractions of the uterus. The muscular effort in whooping-cough may also explain the leukocytosis in this disease. The rigid contraction of the abdominal musculature also plays a part in raising the leukocyte count with incipient peritonitis. These physiologic influences on the leukocyte count from digestion and muscular effort should be duly estimated in interpreting the leukocytosis of inflammation and febrile diseases, especially in differentiating typhoid, suppuration and pneumonia. The intensity of the leukocytosis corresponds in general to the severity of the infection; the most correct index of this, however, is the hemolytic action on the red corpuscles. He insists that the leukocyte reaction cannot be accepted under all circumstances as an index of the general vital energy of the organism.

Franz discusses the leukocyte count from the standpoint of the gynecologist and obstetrician, not ascribing much importance to it.

45. **Unfavorable Experiences with Salvarsan in Syphilis of the Eye.**—Falta warns that if the optic nerve is already diseased, salvarsan is liable to do harm. With syphilitic disturbance of the retina, chorioid and vitreous body, it is much safer to apply the ordinary mercury and iodid treatment, giving salvarsan only in case this fails. In his two cases as also in one of Finger's, the aggravation of the disturbances in the depths of the eye under salvarsan did not retrogress when mercury was given; under other conditions mercury generally promptly controls disturbances of this kind. The salvarsan seemed to have rendered them refractory to the ordinary measures. He warns that salvarsan should never be given without careful examination of the eye. He conferred with Ehrlich in regard to his first case, and Ehrlich advised a cautious repetition of the salvarsan injection, but as Falta had met with his second similar and severer case in the meantime, he did not dare to risk giving the salvarsan again. In the first case bilateral neuroretinitis had existed for a time and became aggravated under salvarsan but improved somewhat under mercury. In the other case an acute neurochorioretinitis increased under salvarsan, and it shows only slight improvement under mercury for nearly a month to date.

Medizinische Klinik, Berlin

April 16, VII, No. 16, pp. 597-640 and Supplement

47 *Septic Abortion. (Prophylaxe und Behandlung des septischen Abortes.) G. Winter.
48 Disease of Lower Intestines. (Diagnose und Therapie der Erkrankungen des unteren Darmabschnittes.) G. Singer.
49 *Revulsion in Modern Therapeutics. (Ueber "ableitende" Verfahren in moderner Beleuchtung.) B. Bloch.
50 *Injury of the Kidneys from Salvarsan. (Ueber Nierenschädigungen durch Salvarsan.) R. Mohr.
51 Antiferment Method of Treatment of Suppurative Processes. H. Boit.
52 Climate from Therapeutic Standpoint. (Grundlagen und Methoden heilklimatischer Beobachtungen.) K. Dove.
53 Efficacy of Induced Pneumothorax in Treatment of Certain Forms of Pulmonary Tuberculosis. C. Saugman.

47. **Prophylaxis and Treatment of Septic Abortion.**—Winter states that the septic cases form fully 27 per cent. of all abortion cases at his clinic (Königsberg) and he here analyzes 100 cases. The mortality was 13 per cent.; only 54 per cent. had a normal course. Study of this material teaches four lessons: 1. The first task is diagnosis. A temperature in the axilla over 38 C. (100.4 F.) is pathologic but it must not be forgotten that spontaneous abortion may occur in the course of an infectious disease, or that an infectious disease may casually occur along with an abortion. 2. The second task is to determine the extent of the infection. If the infection has passed beyond the uterus, decomposition of the uterine content is of secondary importance. Any attempt to evacuate the uterus is liable to do more harm than good; many a septic abortion has terminated fatally on account of this alone. In general practice many errors have been committed in this line, either from disregard of the extra-uterine infectious conditions or from the mistaken view that removal of the primary focus will have a favorable influence on the secondary foci. Before attempting active treatment of the abortion, the fact that the infection is limited to the uterus must be demonstrated. 3. The septic abortion diagnosed and the vicinity of the uterus still free from infection, the further conduct of the case must depend on the bacteriologic findings except when hemorrhage forces immediate intervention. Bacteriologic examination of the secretions, taken from the depths of the vagina, may show the presence of hemolytic streptococci, and it is wise to wait even twenty-four hours for the results of this examination, as hemolytic streptococci reveal that the trouble is an acute infectious endometritis in connection with an abortion. Here the danger with active treatment is very great. No local measure should be attempted, but everything done to increase the resistance; ergot is useful by limiting absorption from the contracted uterus wall and promoting expulsion of the relics of the ovum. This expectant treatment is tedious but the advantages are very great. In five such cases in his experience, the hemolytic streptococci spontaneously disappeared by the end of 4, 7, 11 or 23 days; then the uterus was safely evacuated without harm. If bacteriologic examination shows only ordinary streptococci, staphylococci, colon bacilli or saphrophytes, the uterus can be evacuated at once. Serious consequences need not be anticipated. 4. In active treatment it is important to disinfect the vagina and uterus as thoroughly as possible, rinsing out the germs thoroughly by prolonged irrigation of the uterus, carefully refraining from anything that might injure the vitality of the tissues or open fresh wounds. Injury of the decidua is less harmful than injury of the musculature, but any erosion opens the portals for invasion by the germs. The use of the curette should not be permitted with septic abortion. Among other points which Winter emphasizes is that flowing blood is much less likely to become infected than stagnating blood and secretions. This should be borne in mind when considering tamponing of the vagina.

49. **Revulsion.**—Bloch explains by the light of allergy the success obtained by physicians of the olden times with revulsion measures. Their facts were sound, like those reported seven years ago by Brocq, showing the benefit of revulsion in certain conditions of chronic intoxication. Bloch reports a case in which a scalp disease developed into a deep parasitic sycosis. After weeks of ineffectual treatment of all kinds, the patient was inoculated on both forearms with a culture of *Achorion quinckeanum*, a fungus closely allied to the trichophyton fungus in question but notable for its power to induce intense allergy. The success surpassed anticipation, the inoc-

ulation evidently transforming conditions so that all the morbid processes retrogressed. The new infection allergized the organism, and enabled it to throw off both the old and the new infection.

50. **Injury of the Kidneys from Salvarsan.**—In this communication from the medical clinic at Leipsic in charge of von Strümpell, Mohr reports three cases of serious injury of the kidneys under salvarsan. In one case severe collapse and diarrhea followed intravenous infusion of the salvarsan, with other symptoms of arsenic intoxication and acute injury of the kidney. It was evidently an acute degeneration of the parenchyma, such as is found in injury of the kidney from corrosive sublimate. The changes had nothing in common with nephritis but were probably the same as those noticed in the sections of the kidney of a young man who died two months after salvarsan treatment (No. 5 of Ehrlich's compilation). The disturbances in Mohr's case rapidly subsided, confirming the reactive nature of the disturbances and the rapid elimination of the arsenic when the salvarsan is given by intravenous injection. The disturbances in the two other cases followed intramuscular injection of the salvarsan and they were evidently a true nephritis following on the toxic degeneration of the parenchyma. In the first case the severe hemorrhagic nephritis has grown constantly worse and a fatal termination is impending. This patient is a young woman and the urine was normal and there was no history of kidney trouble, but two months after the intramuscular injection of 0.5 gm. salvarsan the severe nephritis was in full development. In the third case polyneuritis developed with symptoms of nephritis in less than three weeks after the injection of 0.7 gm. of salvarsan. These cases seem to confirm the assumption that the salvarsan undergoes toxic transformation in the muscular deposits. They teach the necessity for watching over the kidneys after salvarsan treatment as trouble may manifest itself after a long period of latency. Mohr refers also to instances of injury of the kidney under salvarsan reported by Géronne, Jadassohn, Scholz and others, besides the case mentioned by Ehrlich.

Monatsschrift für Geburtshülfe und Gynäkologie, Berlin

54 *The Roentgen Rays in Gynecology. A. Döderlein.
55 Prolapse of the Placenta. (Vorfall der Nachgeburt.) E. Basset.
56 Vaccine Therapy of Gonorrhea in Women. (Versuche zur Vaccinebehandlung der weiblichen Gonorrhoe.) F. Heinsius.
57 *Massage and Gymnastic Exercises During Pregnancy and the Puerperium. (Physikalische Therapie in Schwangerschaft und Wochenbett.) F. Kirchberg.
58 Puncture of Ovarian Cysts. A. Littauer.
59 *Operative Treatment of Cystocele. M. Brenner.
60 Camphorated Oil in Treatment of Unencapsulated Suppurative Peritonitis. A. Krecke.
61 The Vaginal Method in Gynecology. D. v. Ott.

54. **Roentgen-Ray Treatment in Gynecology.**—Döderlein says that he regards the use of the Roentgen rays in therapeutics as still an experiment, but that this method of treatment is giving fine results in certain cases, especially in climacteric hemorrhage for which neither palpation nor microscopic examination can discover whether the hemorrhage is the result of degeneration of the vessels in the uterus or of disease of the ovaries, myometrium or endometrium. All other methods of treatment generally fail unless the apparently sound internal genitals are removed when the hemorrhages are weakening the patient to such an extent that it is impossible to wait for the natural retrogression of the genitals with the approaching menopause. It is in this group of cases that the Roentgen rays show themselves supreme; in the simplest and most harmless manner the internal genitals are hastened into the menopause stage by exposures of the ovaries to the rays. They act in such an elective manner that the internal secretion of the ovaries does not seem to be affected. Döderlein has thus treated twelve women with an interval since of over six months. They were women between 40 and 50 with violent hemorrhages, the hemoglobin being reduced to only 30 per cent. in some, and the red count very low. A very few exposures sufficed to put an end to the ovarian functioning at fault and the general health promptly recuperated. The closer to the natural menopause, the more rapidly effectual the Roentgen rays. Reifferscheid has also reported similar gratifying results in this class of cases. In younger women this treatment has proved effectual in curing dysmenorrhea, but there is danger in the young of malformation of the embryo in conception later. Intense vulvar pruritus, rebellious to all other measures, subsided completely in Döderlein's two cases of this kind in women 29 and 56 years old. The danger of cancerous degeneration of myomas and of exacerbation of the hemorrhages from a myoma, close the door practically to Roentgen-ray treatment of myoma. Albers-Schönberg's fatalities with it teach that at least patients with 40 per cent. hemoglobin and great losses of blood from myomas must be excluded from this treatment.

57. **Massage and Gymnastic Exercises During Pregnancy and the Puerperium.**—Kirchberg does not hesitate to state that constipation yields invariably to a correct course of massage and exercises, including constipation in pregnancy and the puerperium. He describes a number of exercises and massage manipulations, the patient aiding by deep breathing in jerks, three pauses in each inspiration and expiration, drawing in the breath rapidly, holding it and then slowly expelling it. The staccato deep breathing and pauses exercise both diaphragm and abdominal muscles and promote the circulation, thus warding off varices. Among other useful exercises for the pregnant woman is to have her lie on her back, twist, bend and lift the legs. Twisting the legs from side to side with the knees bent, exercising against resistance, acts particularly on the abdominal muscles. He ascribes the development of the breasts to the condition of the pectoralis muscles, and deep breathing and other exercises to develop these muscles, he says, aid in developing the bust, which massage of the breasts alone is unable to accomplish. Frequent reclining with the pelvis raised will aid in curing a tendency to varices and hemorrhoids. Any rise in temperature, he says, directly contra-indicates massage under any conditions. With uncontrollable vomiting, massage and exercise are indispensable adjuvants.

59. **Treatment of Recurring Cystocele.**—Brenner raises the mouths of the ureters in the bladder, detaching them from their base in the wall, and then draws a catgut suture through the tissues beneath each, tying the ends to draw the tissues up into a stout fold below each ureter mouth. The catgut takes hold at the same time of the stout connective tissue between the ureters and part of the ligament, thus obtaining a firm hold. The operation is done by a laparotomy and proved successful in the case reported of inveterate recurring cystocele of obstetric origin.

Münchener medizinische Wochenschrift

April 11, LVIII, No. 15, pp. 777-832

62 *Immobilization of Lung by Rear Resection of Ribs. (Neue Methode zur Verengerung des Thorax bei Lungentuberkulose.) M. Wilms.
63 Radium Emanations in Therapeutics. J. Strasburger.
64 Bacteriologic Research in Puerperal Fever. (Ueber bakteriologische Untersuchungen und ihre Methoden bei Febris puerperalis. II.) H. Schottmüller.
65 *Estimation of the Pulse Values. (Die neuen Methoden der dynamischen Pulsdiagnostik, ohne Mathematik dargestellt.) T. Christen.
66 *The Phonendoscope for Testing the Hearing. (Einige akustiche Untersuchungen mit Hilfe des Endophonoskops.) H. Streit.
67 Technic of the Wassermann Reaction. P. Schmidt.
68 Spastic Dislocation of Hip Joint. (Ueber die "Spastische Hüftluxation" und die Veränderungen des Hüftgelenkes bei spastischen Zuständen der unteren Extremitäten.) H. Weber.
69 *Nephritis After Salvarsan Treatment of Syphilis. (Beobachtungen über Nephritis nach Salvarsanbehandlung.) F. Weiler.
70 *Salvarsan in Pneumonic Plague. O. Schreyer.
71 General Anesthesia by Intravenous Injection of Anesthetics. (Ueber intravenöse Narkose.) L. Burkhardt.

62. **Operative Compression of the Lung.**—Wilms found that the size of the half of the chest involved was materially reduced by resecting over an inch of the ribs close to their junction with the spine. This was easily done through three transverse incisions in the musculature of the back after a single lengthwise incision through the skin. The ribs not only slid backward after they were cut, but also slid downward, thus compressing the apex of the lung in particular. He has applied this measure in one case with excellent outcome. The patient was a young woman with tuberculosis of

the left upper lobe for fifteen years, recently showing signs of aggravation, with a tormenting cough, and 10 c.c. of sputum a day. Radioscopy showed a distinct cavity in this lobe, but the general condition was good. The patient ceased to cough by the end of the third week after the operation and there was no further expectoration. It had been intended to supplement this operation by dividing the ribs in front close to the sternum, but the desired result had been attained without this, so nothing further was attempted. Wilms reenforced the compression by strips of plaster, binding down a roll of gauze along tne wound. The patient also lay on the affected side to enhance the compression of the chest. A compressive bandage might also be applied. He urges others to seek out the cases of chronic isolated indurated tuberculous processes liable to be benefited by immobilization of the lung and give this method a trial.

65. **Study of the Pulse.**—Christen declares that the old-fashioned method of palpation of the pulse is more reliable than the apparently more scientific method of sphymography. He has devised a method for registration of the features of the pulse which he claims presents with mathematical precision the volume of the blood and the force it displays in the pulse. The stasis curves thus obtained (*Stauungskurven*) take the place of palpation of the pulse, substituting an exact mathematical-physical method—energometry—which throws new light, he says, on the dynamic conditions in the circulation.

66. **Phonendoscope in Testing the Hearing.**—Streit stands the tuning fork on the base of the phonendoscope and then records the second when the patient, by raising his finger denotes that he has ceased to hear the tuning fork through the tube through which he is listening while the examiner is listening through the other tube. It is also possible to convey the sound through the Eustachian tube to the ear by this means, connecting the phonendoscope tube with a catheter.

69. **Injury of Kidneys from Salvarsan.**—The first of the three cases reported by Weiler is the same case of hemorrhagic nephritis described by Mohr and summarized above in abstract 50. Weiler's communication issues from the dermatologic clinic at Leipsic, in charge of Rille. The course of the nephritis in his three cases was more severe when the salvarsan had been given by intramuscular injection. He concludes with the remark that it is possible that the three individuals in question might have been especially predisposed to kidney trouble, but it is also possible that the kidneys in other patients may have suffered to a slight extent under the salvarsan treatment. Such injury may remain latent for a time and perhaps, if the salvarsan is given again or some other source of irritation develops, may manifest itself clinically later. He quotes Bornstein's finding of 0.0031 gm. arsenic trioxid in the kidneys and over twice this amount in the liver of a man dying two weeks after an intramuscular injection of salvarsan. Rille has also reported large amounts of arsenic demonstrable in the necrotic focus in the gluteal muscles at necropsy sixty-four days after an intramuscular injection of 0.7 gm. salvarsan. It is remarkable, he adds, that a few patients who developed albuminuria under mercury showed no signs of injury of the kidneys under salvarsan. Werther has reported a case in which a girl of 17 developed transient hemorrhagic nephritis after intravenous injection of 0.25 gm. salvarsan and it has recurred later in an acute transient form without further administration of salvarsan. Martius has reported an acute morbid process in a contracted kidney, the patient, a man of 39 with old changes in the kidney and arteriosclerosis, dying five hours after intravenous injection of 0.5 gm. salvarsan in 250 c.c. of fluid. In Treupel's experience, chronic nephritis on a syphilitic basis seemed to benefit by the salvarsan treatment, the albuminuria declining. He reports two cases in which traces of albuminuria developed after intravenous injection of the salvarsan, the only ones indicating possible injury of the kidney among his 250 cases. Sellei has reported two cases of latent nephritis aggravated by the salvarsan; in one of these there was albuminuria to six per thousand and hematuria the day after the intravenous injection of salvarsan, eight weeks after a subcutaneous injection of the same. The hematuria rapidly subsided but the albumin still amounted to two per thousand a week later.

70. **Salvarsan in Pneumonic Plague.**—Both of the two patients given salvarsan died, but one showed transient benefit.

Zeitschrift für Urologie, Berlin

April, V, No. 4, pp. 241-320

72 Means to Influence Infectious Processes in Urinary Passages. (Beinflussung der infektiösen Prozesse der Harnwege.) L. Casper and A. Citron.
73 Chromocystoscopy in Determination of Kidney Sufficiency. (Die Chromouteroskopie in der funktionellen Nierendiagnostik.) B. A. Thomas (Philadelphia).
74 Gunshot Injuries of the Kidneys. (Zur Geschichte der Nierenschüsse.) E. Küster.
75 *Cerebral Neurasthenia from Automobiling and Its Depressing Influence on the Sexual Sphere. (Automobil und Sexualvermögen.) A. v. Notthafft.
76 Sound for Urethral Massage. (Eine "Rosenkranzonde" für Urethralmassage.) W. Tittinger.

75. **Automobiling Speed Mania and Impotency.**—Notthafft reports four cases of sexual impotency in wealthy married men fond of automobile speeding and one in a chauffeur. He knows of similar cases in the experience of others. The sexual depression developed in from three months to three years after special devotion to the sport. He ascribes the impotency to a cerebral neurasthenia from the nervous strain of the speeding; this assumption is sustained by recovery of normal tone when the automobilist refrains from speeding and drives his machine with ordinary prudence. Notthafft cites statistics which show that 12.1 per cent. of the 49,941 motor vehicles in the German empire were responsible for some accident serious enough to be reported to the authorities during 1909, a total of 6,063 accidents, involving 225 drivers, 487 other occupants of the car and 2,333 outsiders. He calculates that the driver of the car was to blame in 86 per cent. of all the accidents. The danger of speeding is not only for the public; the driver knows that he is taking his life in his hand and that he has one foot in the courts, for he is never certain that he may not run into some one at any moment. The intense concentration of mind required in speeding, the anxiety and the jar of the car—all tend to induce neurasthenia. The laws to regulate speeding are consequently not only in the interest of the public but of the automobilists themselves. Notthafft remarks that the attempts to limit the speed to a certain number of miles an hour does not answer the purpose. It would be better to make the general rule "No fast driving" apply to automobiles as well as to other vehicles, instead of setting a special speed limit. It is so often impossible to prove when this limit has been exceeded even when all know that the machine was being driven too fast.

Zeitschrift für klinische Medizin, Berlin

LXXII, Nos. 1-2, pp. 1-188. Last indexed Feb. 4, p. 389, and May 6, p. 1371

77 Sphygmobolometry: Determination of the Energy of the Pulse. (Der weitere Ausbau der Sphygmobolometrie oder energetischen Pulsdiagnostik.) H. Sahli.
78 Fourteen Cases of Chronic Lymphatic and Myeloid Leukemia with Necropsy in Three. K. Ziegler.
79 Relations Between Excessive Functioning of Glands with an Internal Secretion and Their Constitution. (Wechselwirkung der Drüsen mit innerer Sekretion. IV.) W. Falta, L. H. Newburgh and E. Nobel.
80 *The Circulation and the Diaphragm. (Kreislauf und Zwerchfell.) H. Eppinger and L. Hofbauer.
81 Reinfection with Relapsing Fever and Its Influence on the Course of the Disease. (Reinfektion beim Rückfallfieber.) S. Jarussow.
82 Action of Acetylsalicylic Acid. (Anwendung und Wirkung der Azetylsalizylsäure beim Typhus abdominalis.) S. Bondi.
83 Idem. (Experimentelle Beiträge.) S. Bondi and H. Katz.

80. **Circulation and Diaphragm.**—Study of the pulse in patients whose diaphragm was unusually high or low showed that the circulation in the legs was better when the diaphragm was high, as the quadrate foramen was thus left open. When the diaphragm was low, this foramen is more squeezed together and the flow of blood up from the lower part of the body is thus impeded. At the same time, deep breathing pushes the diaphragm low down and it thus presses on the liver and liver veins and thus promotes the circulation in the region.

XUM

Zentralblatt für Chirurgie, Leipsic

April 15, XXXVIII, No. 15, pp. 531-564

84 *Continuous Suture for Entero-Anastomosis. (Zur Technik der Darmnaht; die fortlaufende Einstülpungsnaht bei der Enteroanastomose.) V. Schmieden.
85 Operative Cure of Congenital Atresia of the Small Intestine. P. Fockens.

84. **Suture for Entero-Anastomosis.**—Schmieden avoids the inconvenience of letting the mucosa get in the way in taking the sutures through the entire wall of the intestine, by passing the needle through the wall of the intestine from within outward, in a continuous suture, while the left hand draws the thread taut. He uses silk and an ordinary tailor's needle. The edges of the wound are drawn inward smoothly by this technic, the thread forming a zigzag line.

Zentralblatt für Gynäkologie, Leipsic

April 15, XXXV, No. 15, pp. 569-608

86 *Septic Abortion. G. Winter.
87 *Treatment of Dysmenorrhea. J. Novak.
88 Allowing Patients to Get Up Early After Delivery and Operations. (Das Frühaufstehen der Wöchnerinnen und Operierten und die hierbei beobachteten Todesfälle.) A. Scherer.

86. **Septic Abortion.**—This article is practically the same as that reviewed in abstract 47 above, Winter's aim being to convince the profession of the necessity for bacteriologic examination in septic abortion, and that the trouble in its severer forms must be regarded as a virulent infection *accompanying* the abortion, *not* caused by the presence of the embryo or embryonal membranes in the uterus (*—ein Infektionszustand bei Abort nicht durch den Abort*).

87. **Dysmenorrhea Result of Spasmodic Contraction.**—Novak noticed that his patients with puerperal bradycardia were very often those who had suffered from dysmenorrhea. This fact, in connection with Drenkhahn's success in treatment of dysmenorrhea with atropin injected into the uterine cervix, confirmed Novak's view that dysmenorrhea in many cases may be the result of spasmodic contraction of the uterus from abnormal irritability of the sympathetic nerve terminals in the uterus, the result being an abnormal exaggeration of the automatic movements of the uterus. This "cramp theory" harmonizes best to date with clinical experiences, and treatment on this basis is giving surprisingly favorable results, he says. In the five cases reported he prescribed two or three 0.0005 gm. pills of atropin, commencing a few hours before the anticipated onset of the dysmenorrhea. The patients were relieved of all tendency to dysmenorrhea, and no by-effects were observed except a slight dryness of the throat.

Zentralblatt für innere Medizin, Leipsic

April 15, XXXII, No. 15, pp. 369-392

89 Kala-azar in Greece. (Das Kala-azar auf Insel Hydra.) A. Aravandinos and N. Michalidis.

Riforma Medica, Naples

April 10, XXVII, No. 15, pp. 393-420

90 *False Mitral Stenosis. (Pseudo-stenosi mitralica.) J. Teissier.
91 Importance of Dosage of Fats in Stools as Sign of Occlusion of Pancreatic Duct. P. F. Zuccola.
92 Ovary Grafts. (Innesti ovarici.) A. Libroia.

90. **False Mitral Stenosis.**—Teissier reports experimental and clinical experiences to sustain the assumption of a possible pseudomitral stenosis in the anemic from excessive functioning of the heart, the signs and symptoms therefrom simulating those of true organic mitral stenosis. It is differentiated from the organic form by the variability in the symptoms, the coexistence of nervous disturbances and signs of anemia, the duration of the systolic sound and, above all, by the absence of any delay in the radial pulse and duplication of the second sound. Radioscopy will confirm the absence of the enlargement of the left auricle of organic mitral stenosis. The prognosis in these cases of pseudostenosis is favorable unless the patient has a tuberculous taint, in which case there is possibility of its transformation into the true organic form. This pseudostenosis explains the cases which have been reported as "spasmodic mitral stenosis." Tonics and sedatives with cautious hydrotherapy and other physical measures are indicated in treatment.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

PART I, THE CULTIVATION OF THE BACILLUS OF LEPROSY AND THE TREATMENT OF CASES BY MEANS OF A VACCINE PREPARED FROM THE CULTIVATIONS. By Major E. R. Rost, I.M.S. Part II, THE CULTIVATION OF THE LEPROSY BACILLUS. By Captain T. S. B. Williams, M.B., I.M.S. Scientific Memoirs, No. 42, New Series. By Officers of the Medical and Sanitary Departments of the Government of India. (Edited by the Director-General, Indian Medical Service.) Issued Under the Authority of the Government of India by the Sanitary Commissioner with the Government of India, Simla. Paper. Price, 8 annas. Pp. 23. Calcutta: Superintendent Government Printing, India, 1911.

A TEXT-BOOK OF MEDICINE. For Students and Practitioners. By Dr. Adolf v. Strümpell, Professor of Special Pathology and Therapeutics at the University of Leipsic. Fourth American Edition. Translated by Permission from the Seventeenth Revised German Edition with Editorial Notes, Additional Chapters, and a Section on Mental Diseases, by Herman F. Vickery, A.B., M.D., Instructor in Clinical Medicine, Harvard University, and Philip Coombs Knapp, A.M., M.D., ex-President of the American Neurological Association. Cloth. In Two Volumes. Price, $12 net. Pp. 831 and 800, with 224 illustrations. New York: D. Appleton & Co., 1911.

GENERAL SURGERY. Edited by John B. Murphy, A.M., M.D., LL.D., Professor of Surgery in the Northwestern University. Volume II, Practical Medicine Series. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Postgraduate Medical School, and Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Series 1911. Cloth. Price, $2. Pp. 611, with 197 illustrations. Chicago: The Year-Book Publishers.

CLINICAL SYMPTOMATOLOGY. With Special Reference to Life-Threatening Symptoms and Their Treatment. By Alois Pick, Professor of Medicine, University of Vienna, and Adolph Hecht, Pediatrician, St. Anne's Hospital, Vienna. An Authorized Translation Under the Editorial Supervision of Karl Konrad Koessler, M.D. (Univ. of Vienna), Instructor of Clinical Medicine, Rush Medical College, in Affiliation with the University of Chicago. Cloth. Price, $6 net. Pp. 833. New York: D. Appleton & Co., 1911.

QUININ AND ITS SALTS: THEIR SOLUBILITY AND ABSORBABILITY. By Captain A. C. MacGilchrist, M.A., M.D., M.R.C.P. Scientific Memoirs, No. 41, New Series. By Officers of the Medical and Sanitary Departments of the Government of India. (Edited by the Director General, Indian Medical Service.) Issued Under the Authority of the Government of India by the Sanitary Commissioner with the Government of India. Paper. Price, 9 annas. Pp. 46. Calcutta; Superintendent Government Printing, India, 1911.

REPORT OF A SPECIAL COMMITTEE APPOINTED BY THE WASHINGTON CHAMBER OF COMMERCE TO INVESTIGATE THE MILK SITUATION IN THE DISTRICT OF COLUMBIA. Prepared by J. L. Willige. Presented by Mr. Gallinger. Document 863, Sixty-First Congress, Third Session. Paper. Pp. 437. Washington: Government Printing Office, 1911.

PROCEEDINGS OF THE TENTH ANNUAL CONFERENCE OF SANITARY OFFICERS OF THE STATE OF NEW YORK, HELD AT Y. M. C. A. AUDITORIUM, BUFFALO, NOV. 16-18, 1910. New York State Department of Health. Paper. Pp. 270. Albany: New York State Department of Health, Division of Publicity and Education.

THE MEDICAL DIRECTORY, 1911. Including the London Medical Directory, The Provincial Medical Directory, the Medical Directory for Wales, Scotland, Ireland, etc. Sixty-Seventh Annual Issue. Cloth. Price, 14 shillings net. Pp. 2128. London: J. & A. Churchill, 7 Great Marlborough Street.

A MANUAL OF THE DISEASES OF INFANTS AND CHILDREN. By John Ruhräh, M.D., Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Third Edition. Flexible leather. Price, $2.50 net. Pp. 534, with 173 illustrations. Philadelphia: W. B. Saunders Co., 1911.

MENINGITIS, SINUS THROMBOSIS AND ABSCESS OF THE BRAIN. With Appendixes on Lumbar Puncture and Its Uses and Diseases of the Nasal Accessory Sinuses. By John Wyllie, M.D., Author of "Tumors of the Cerebellum." Cloth. Price, $3 net. Pp. 258. New York: Paul B. Hoeber, 1911.

SIXTH ANNUAL REPORT OF THE TRUSTEES OF THE STATE SANATORIUM, AT WALLUM LAKE. For the Year Ending Dec. 31, 1910. State of Rhode Island and Providence Plantations. Harry Lee Barnes, M.D., Superintendent, Wallum Lake, R. I. Paper. Pp. 94.

SIXTY-SECOND ANNUAL REPORT OF THE BOARD OF TRUSTEES AND SUPERINTENDENT OF THE CENTRAL INDIANA HOSPITAL FOR INSANE AT INDIANAPOLIS, IND. For the Fiscal Year Ending Sept. 30, 1910. To the Governor. Paper. Pp. 70. Hugh T. Miller, Secretary.

REPORT OF THE DEPARTMENT OF HEALTH OF THE CITY OF CHICAGO. For the Years 1907, 1908, 1909, 1910. W. A. Evans, M.S., M.D., LL.D., Commissioner of Health. Cloth. Pp. 446. Chicago, 1911.

CHEMISTRY OF FOOD AND NUTRITION. By Henry C. Sherman, Ph.D., Professor in Columbia University. Cloth. Price, $1.50 net. Pp. 355. New York: The Macmillan Co., 1911.

WHAT TO EAT AND WHY. By G. Carroll Smith, M.D., Boston, Mass. Cloth. Price, $2.50 net. Pp. 310. Philadelphia: W. B. Saunders Co., 1911.

A COMPLETE EXPOSÉ OF THE DOCTOR-DRUMMING EVIL AT HOT SPRINGS, ARK. By Fred W. Vaughan, Hot Springs, Ark. Paper. Pp. 48. (1911).

ANNUAL REGISTER OF THE NEW MEXICO SCHOOL OF MINES, SOCORRO, N. M., 1910-1911. With Announcements for 1911-12. Paper. Pp. 92.

The Los Angeles Session

(*Concluded from page 1481*)

HOTEL RATES AT LOS ANGELES

Following is a list of hotels and the rates as reported to the Los Angeles Convention League. There are 400 family and tourist hotels and apartments available which are not included in the list. Those wishing to reserve rooms should write direct to the hotels, or to the Committee on Arrangements.

The Hotel Alexandria will be General Headquarters.

RATES AT LOS ANGELES HOTELS

NAME OF HOTEL, PLAN*, AND NO. OF ROOMS	ONE PERSON		TWO PERSONS	
	Without Bath	With Bath	Without Bath	With Bath
Alvarado, A., 100.....	$2.50 up	$4.50 up	$4.50 up	$5.00 to $7.00
Alexandria, E., 700...	2.00 to 3.00	3.00 to 5.00	3.00 to $4.00	4.00 to 10.00
Angelus, E., 300.....	1.50 to 3.00	2.50 to 5.00	2.50 to 4.00	4.00 to 10.00
Astoria, E.. 200.....	1.00	1.50	2.00	2.50
Auditorium, E., 150...	1.00 up	2.00 up	2.00 up	3.00 up
Broadway, E., 200.....	1.00 to 2.00	1.50 to 2.50	1.50 to 3.00	2.50 to 4.00
Fremont, A., 100.....	2.50 up	5.00 up	3.50 up	6.00 up
Hampden Arms, E., 60	1.00	1.50 to 2.00	1.50	2.00 to 2.50
Hayward, E., 300.....	1.50 up	2.00 up	2.00 up	3.00 up
Hollenbeck, E., 500...	1.00 up	1.50 up	2.00 up	3.00 up
Hollywood, A., 200....	2.00 up	4.00 up	2.50 up	6.00 up
Ingraham, A., 100.....	2.50 up	4.00 up	3.50 up	5.00 up
King Edward, E., 150.	1.00 up	1.50 up	1.50 to 3.00	2.00 to 3.00
Lankershim, E., 300..	1.50 up	2.00 up	2.50 up	3.00 up
Leighton, A., 125.....	3.00 up	3.50 up	5.00 up	6.00 to 10.00
Melrose, A., 200.....	2.50	4.00	3.50	5.00
Munn, E., 100.....	.75 to 1.00	1.00 to 1.50	1.25	1.50 to 2.00
Nadeau, E., 150.....	1.00 up	1.50 up	1.50 up	2.50 up
Natick, E., 160.....	.75 up	1.00 up	2.00 up	3.00 up
Occidental, E.. 200....	1.00 to 2.00	1.50 to 2.50	1.50 to 3.00	2.50 to 4.00
Percival, E., 250.....	.75 to 2.00	1.50 to 3.00	1.00 to 2.00	2.00 to 4.00
Rosslyn, E., 285.....	.75 up	1.00 up	1.50 up	2.50 to 4.00
Snow, E., 100.....	1.00 to 2.00	1.50 to 2.50	1.50 to 3.00	2.50 to 3.50
Trenton, E., 165.....	1.50 up	2.00 up	2.00 up	2.50 up
Van Nuys, E., 160.....	1.50 up	2.50 up	2.50 up	4.00 up
Victoria, E., 100.....	1.00 up	1.50 up	2.00 up	2.50 up
Watson, E., 100.....	1.00 up	1.50 up	1.50 up	2.00 up
Westminster, E., 250..	1.00 up	2.00 up	1.50 up	3.00 up
Woodward, A., 125....	2.00 up	3.50 up	2.50 up	4.00 up
Westmore, A., 100.....	2.00 up	2.50 up	4.00 up	5.00 up
Yorkshire, E., 100.....	1.00	1.50 up	1.50 up	2.00 up

* A, American plan; E, European plan.

Any who desire to stay either at the seashore or near the mountains will be given special rates at the Hotel Maryland at Pasadena, and the Hotel Virginia at Long Beach. (See the map on page 1481.)

The Maryland, at Pasadena, 9 miles from Los Angeles, is a first-class homelike place. Special rates include transportation both ways, via the electric lines. Trains run every ten minutes.

The Hotel Virginia is a fire-proof, first-class modern hotel, directly on the beach, and is reached by trains every twenty minutes. The run takes forty minutes.

Either of these cities will be found delightful places to stay, and with the excellent train service little inconvenience will be experienced in reaching the meetings. Accommodations should be arranged for in advance.

There are other first-class hotels at both of these places, and accommodations may be had at other seaside resorts also.

SECTION MEETING PLACES AND HOTEL HEADQUARTERS

The Committee on Arrangements has fixed the meeting places for each of the sections and designated hotels as headquarters, as given under the map on the next page.

It will be noted from the accompanying map that the arrangement of the halls is a very compact one, and that the hotels are very conveniently near. They are practically all included in an area bounded by First Street on the north, Ninth Street on the south, Main Street on the east, and Grand Avenue on the west, the Section on Stomatology being furthest away from the center, at the corner of East Fifth and Wall Streets, but not farther from the principal hotels than the others. The Committee on Halls has arranged to have every needed convenience to facilitate the work of the sections. Communications on this subject should be addressed to Dr. Albert Soiland, 916 Wright and Calender Building, Los Angeles.

RAILROAD RATES

Final Announcement of Rates by the Railroads

The rates to the Los Angeles meeting given by the railroads have been announced from time to time in previous issues and perhaps most members who will make the trip to the meeting have arranged for their transportation and the trains by which they will go, before this time; but, for the benefit of those who have not done so, a restatement of the rates may be made. All the roads in the Central, Eastern and New England Passenger Association territories have made a rate of one fare and a half for the round trip to Chicago, Pullman fares of course being extra.

The fare from Chicago to Los Angeles, going and returning by the same route or going one way and coming back another by any route as far north as San Francisco, is $62.50. From St. Louis, Memphis and New Orleans the rate is $57.50. Missouri River Gateways (Omaha to Kansas City inclusive), $50.00; St. Paul and Minneapolis, $63.50. Dates of sale are June 5 and 6 and June 10 to 22, both inclusive. The final return limit is September 15.

The fare either going or returning via one of the northern routes, that is, by the way of Portland, Tacoma, Seattle or Vancouver, will be $15.00 additional. But it should be noted that this rate is not available both going and returning by the northern route.

The Pullman rates from Chicago on the American Medical Special which runs by way of the Santa Fe road are: Upper berth, $12.80; lower berth, $16.00; compartment, $45.00; drawing-room, $56.00. These rates include the side trip to the Grand Canyon and also provide for the occupancy of the cars at the Grand Canyon, if so desired. The railroad fare for the Grand Canyon trip will be $6.50 additional.

Pullman rates from Chicago on the Burlington-Colorado Scenic Special described below are as follows: Lower berth, $15; upper, $12; section, $27; compartment, $42; drawing-room, $53. This allows for the occupancy of the car all night on the stopover at Colorado Springs.

The Pullman rates by the Chicago Medical Society Special which runs via the Chicago and Northwestern and the Salt Lake routes through Omaha and Salt Lake are: Lower berth, $13.00; upper berth, $10.40; compartment, $36.50; drawing-room, $46.00. Pullman rates from the east can be had on application from the railroads.

The attention of physicians in the central west, who expect to go via Missouri Valley Special from Kansas City, is called to the fact that there will be special Pullman cars from Omaha, St. Louis, Des Moines and St. Joseph, joining the Special at Kansas City. Pullman rates are: Lower berth, $14.00; upper berth, $11.20. This includes Omaha and all Missouri River points and includes also stop-over privileges at the Grand Canyon, where the cars may be occupied. Arrangements have been made for the party going via Missouri Valley Special to return by way of Vancouver and the Canadian Pacific, St. Paul and Minneapolis, and a rate of $71.75 from Missouri River points has been made for the round trip.

Attention is also called to the fact that round trip tickets must be purchased before starting and the route of return must be selected then, as no change can be made later without entailing extra expense.

For the convenience of members, we again publish a description of the various special trains and tours, together with information concerning return trips, previously published in the issue of March 25.

TRAINS TO LOS ANGELES

Details of Special Trains and Special Parties Arranged for the Trip to the Next Annual Session

Below are given in brief accounts of some of the special parties that are being arranged. But no one will depend alone on this description. Everyone who is thinking of going to Los Angeles should write for booklets and information to all whose addresses are given in the following itineraries. If these books are studied, one can obtain a general knowledge of the various attractions and then can decide which route is

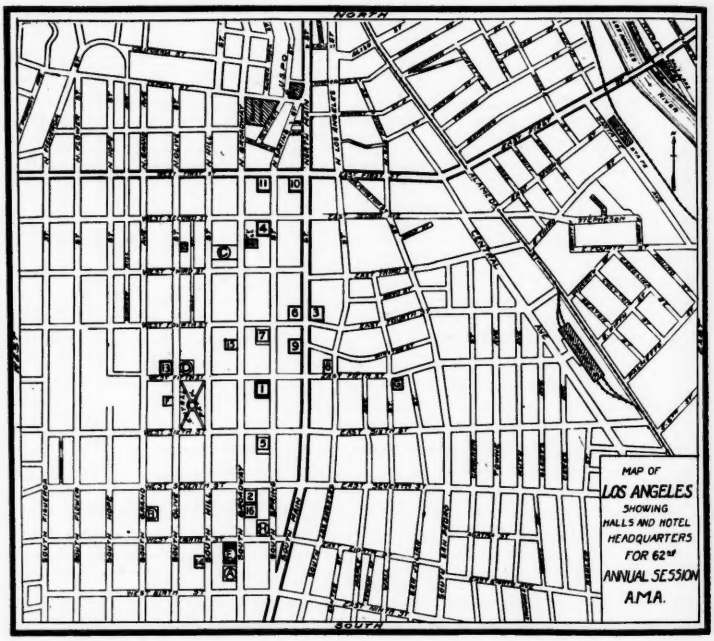
the most attractive. Some will want to see the Grand Canyon of the Arizona, a sight worth a trip across the country. Others will feel more favorable to the Pike's Peak country, Manitou, the Garden of the Gods and the various attractions of that part of the Rocky Mountains. Others will have a great desire to see the Yellowstone Park and its wonders. Still others will seek the northwestern part of the country—Oregon, Washington, etc., and the attractions of the Canadian Rockies on the Canadian Pacific. Not all of these can be seen on one trip, even on the round trip. Each individual should make up his mind what he is most anxious to see and then study the various itineraries and learn which one will best suit him.

The advantages of selecting one of the special trains, rather than to go by the regular trains, are the additional conveniences provided, the pleasure of traveling with friends and acquaintances, and the relief from the cares of looking after change of trains, hunting up conveyances for side trips, guides, etc., and the satisfaction of having everything provided in advance for comfort and for entertainment during the trip.

We mention below the special trains concerning which we have received information:

AMERICAN MEDICAL SPECIAL.—This luxurious Pullman train with full equipment will run from Chicago to Los Angeles via the Santa Fe and will leave Chicago at 8:00 p. m., Wednesday, June 21, reaching Kansas City at 9:00 a. m., Thursday, June 22, and running thence through New Mexico and Arizona to Los Angeles, which will be reached Monday, June 26, at 7:00 a. m. At Albuquerque the train will make a stop of an hour and a half to allow an inspection of the Fred Harvey collection of Indian handwork. Another stop will be made at Laguna, where an hour will be allowed to inspect the village of the Laguna Indians. The train will stop at the Grand Canyon for twenty-eight hours, giving opportunity to see the Grand Canyon of the Arizona. The desert of lower California will be crossed in the night. At San Bernardino the train will be divided—one section running through directly to Los Angeles, arriving at 7:00 a. m.—and the other going via Redlands and Riverside, stopping at each of these places to allow visits to points of interest. This section arrives at Los Angeles at 4:30 p. m., Monday. Special illustrated folders, reservations and full information may be obtained from G. T. Gunnip, General Agent, A. T. & S. F. Ry., 105 Adams Street, Chicago.

AMERICAN ACADEMY OF MEDICINE TOUR.—Another trip arranged from the east is that of the American Academy of Medicine, whose itineraries have been selected and arranged under the guidance of the passenger departments of the railroads to secure the most desirable trains and the best disposition of daylight sight seeing. Regular trains will be used. This party will leave New York over the Lehigh Valley railroad at 11:55 a. m., Monday, June 12, Philadelphia, at 12:30 p. m., and join the New York train at South Bethlehem at 2:12 p. m. and arrive at Buffalo over the Lehigh Valley at 10:27 p. m. The route will be thence over the Grand Trunk to Chicago, the Burlington to Denver and to Los Angeles over the Santa Fe. Interesting side trips and visits to the points of interest in Colorado and to the Grand Canyon will be provided for and Los Angeles will be reached Friday, June 23, in time for the sessions of the academy, which meets in advance of the American Medical Association. This party may be joined at various points along the route at a much later date, in case it is not desired to spend so much time on the going trip. Reservations for this party are to be made through the secretary, Dr. Charles McIntire, 52 North Fourth Street, Easton, Pa., from whom may be obtained the folder containing all details, both of the outgoing and of the return trip.



LIST OF SECTION MEETING PLACES AND HOTELS

Section, etc.		Name of Hall	Location of Hall		Hotel Headq'ters	Location of Hotel
General Hotel Headquarters		.....	.....		Alexandria	5th and Spring
Registration	E	Hamburger (4th floor)	8th and Broadway		.....	.....
House of Delegates	H	Armory	8th and Spring		.....	.....
Commercial Exhibit	E	Hamburger (4th floor)	8th and Broadway		.....	.....
President's Reception	I	Shrine Auditorium	655 W. Jefferson		.....	.....
Smoker	E	Hamburger (roof garden)	8th and Broadway		.....	.....
Scientific Exhibit	E	Hamburger (4th floor)	8th and Broadway		.....	.....
Information, P. O., etc	E	Hamburger (4th floor)	8th and Broadway		.....	.....
Practice of Medicine	A	Majestic Theater	8th and Broadway	2	Lankershim	7th and Broadway
Nervous and Mental Diseases	B	Walker (McKinley)	7th and Grand	3	Westminster	4th and Main
Diseases of Children	B	Walker (Lincoln)	7th and Grand	3	Westminster	4th and Main
Pathology and Physiology	C	Blanchard (Symphony)	3d and Hill	4	Hollenbeck	2d and Spring
Surgery	D	Baptist Auditorium	5th and Olive	1	Alexandria	5th and Spring
Obstetrics	D	Baptist Aud. (Berean)	5th and Olive	5	Hayward	6th and Spring
Preventive Med. and Pub. Health	E	Hamburger's	8th and Broadway	1	Alexandria	5th and Spring
Pharmacology	B	Walker (Garfield)	7th and Grand	2	Lankershim	7th and Broadway
Ophthalmology	F	Parish (2d floor)	6th and Olive	6	Van Nuys	4th and Main
Laryngology and Otology	F	Parish (1st floor)	6th and Olive	7	Angelus	4th and Spring
Stomatology	G	Dental College	5th and Wall	8	King Edward	5th and Los. A.
General Session	D	Baptist Auditorium	5th and Olive		.....	.....

OTHER HOTELS ON THE MAP

9. Rosslyn. 10. Natick. 11. Nadeau. 12. Astoria. 13. Auditorium. 14. Percival Apts. 15. Broadway. 16. Yorkshire.

BURLINGTON-COLORADO SCENIC SPECIAL.—This special train from Chicago to Los Angeles, via the Burlington, Denver & Rio Grande and the Salt Lake Route, will have the finest equipment of the Burlington road. It leaves Chicago at 11:00 p. m., June 21, and reaches Denver at 7:00 a. m., June 23. The party will spend four hours in Denver and vicinity, leaving at 11:00 a. m., June 23, reaching Colorado Springs (Manitou) at 1:30 p. m. The train will be parked and will remain there all night. This will give an opportunity for the party to go up Pike's Peak, visit the Garden of the Gods, Cheyenne Canyon, the celebrated "High Drive," the famous Iron and Soda Springs, and other points. The train leaves Manitou at 4:30 a. m., June 24, and reaches the Royal Gorge at 7:30 a. m., giving a splendid opportunity to see this wonderful gorge. At Glenwood Springs, an hour and a half will be spent, and Salt Lake City will be reached at 8:30 a. m., June 25. Four hours will be spent in Salt Lake, leaving at 1:00 p. m., and Los Angeles will be reached at 12:00 o'clock noon on June 26. This train traverses the mining regions of Utah and Nevada, and Rainbow Canyon and the Canyon of the Mojave River before reaching the orange country of southern California. This train has been arranged at the request of many physicians (represented by Drs. Robert T. Gillmore, Sidney Kuh and Charles B. Reed), who want to go by the Manitou and Royal Gorge route. Full details and illustrated booklets may be obtained from A. J. Puhl, General Agent, C. B. & Q. Ry., Chicago.

CHICAGO MEDICAL SOCIETY SPECIAL.—The special train of the Chicago Medical Society will leave Chicago at 9:15 p. m., June 22, via the C. & N. W. Ry.; arrive in Omaha 9:15 a. m., June 23, leave Omaha 9:30 a. m., arrive in Salt Lake 1:30 p. m., June 24, spending the afternoon at Salt Lake, leaving at 5:30 p. m., June 24, via Salt Lake Route, arriving at Los Angeles at 4:30 p. m., June 25. This train will be provided with full Pullman equipment of the most complete and modern character. Meals in dining car will be served à la carte. At Salt Lake arrangements will be made for a special organ recital at the Mormon tabernacle, balance of the afternoon to be spent in sight-seeing. Leaving Salt Lake, the journey lies over the Salt Lake Route through Utah and Nevada, reaching the rich mining districts, passing through Caliente, where Rainbow Canyon is entered, with its great walls of rock of every shade; and Las Vegas. Entering California, the line traverses the canyon of the Mojave river and at San Bernardino reaches the famous Orange Belt of California. The train then runs through Riverside, Ontario and Pomona, cities situated in the fruit-growing section adjacent to Los Angeles. Arrangements have been made so that any physician anticipating telegrams en route will have same sent in care of this special train and be received promptly. Elaborate itinerary will be furnished on application to Dr. George F. Suker, Secretary, 103 State Street, Chicago.

GATES SPECIAL TRAIN.—A special itinerary is being arranged by the Gates Tours of Toledo, O., with several optional return schedules. A special train will leave Chicago, June 20, stopping enroute at the Grand Canyon, and returning, trains will leave Los Angeles July 1. Full details of the trips, including the return schedules which include Alaska, may be obtained of the Gates Tours, Toledo, O.

MISSOURI VALLEY SPECIAL.—This special train, under the auspices of the Medical Society of the Missouri Valley and the Medical Association of the Southwest, will accommodate members from the central west and southwest. It will leave Kansas City Thursday, June 22, via the Santa Fe, and will also stop over one day for the trip to the beautiful Grand Canyon. It will arrive at Los Angeles on Sunday, after the trip through the orange country. The tour will be personally conducted and a special interesting itinerary is planned for the return trip. Full particulars may be obtained, and hotel and Pullman accommodations arranged for, through Dr. Charles Wood Fassett, St. Joseph, Mo.

NEW YORK AND NEW ENGLAND SPECIAL.—This is another train which has been planned in care of McCann's Tours by Dr. Wisner R. Townsend, Secretary of the New York State Medical Society. This train, fully equipped with modern conveniences and comforts, will leave New York, via the New York Central Lines, at 6:30 p. m., Monday, June 19, connecting with trains leaving Boston at 2:00 p. m., Worcester at 3:11 p. m., Springfield 4:40 p. m., and Pittsfield 6:30 p. m. It leaves Albany at 9:55 p. m., Utica 11:55 p. m., Syracuse 1:08 a. m., June 20, Rochester 2:45 a. m., Buffalo 4:30 a. m. The train will run thence via Cleveland, Indianapolis and St. Louis, and from Kansas City via the Santa Fe through New Mexico and Arizona, reaching the Grand Canyon, Friday, June 23, where twenty-eight hours will be devoted to sight seeing in this marvelous natural chasm, one of the wonders of the world. Los Angeles will be reached at 9:00 p. m., June 25. Time will be allowed to visit the famous orange groves and to view the other points of interest at Riverside and Redlands, as has been described above concerning the other trains. The return trip is one of some length and will include many other parts of the beautiful west which are to be enjoyed at leisure. Information concerning this tour and the daily schedule of the train, including the various possibilities on the return trip, may be obtained through Dr. Wisner R. Townsend, 125 W. 58th Street, New York City.

PENNSYLVANIA SPECIAL.—From the east a personally conducted tour has been arranged under the direction of Dr. C. L. Stevens, Secretary of the Pennsylvania State Medical Society, Athens, Pa., in conjunction with McCann's Tours. The train will be of the highest grade Pullman equipment, including a gentlemen's club car and a ladies' club and observation car, with all the accessories and accommodations of the modern train *de luxe*. The special train will leave Jersey City Saturday, June 17, at 4:14 p. m., via the Lehigh Valley railroad, and may be joined at various points between there and Buffalo by passengers from New Jersey, eastern Pennsylvania and Maryland. The train will leave Buffalo via the Lake Shore at 4:30 a. m., June 18, running thence through Cleveland, Indianapolis, St. Louis, Kansas City, Santa Fe, and Albuquerque to the Grand Canyon, where a side trip of twenty-eight hours will be made. Thence the route will include the heart of the orange country in California, Riverside and Redlands, at both of which places time stops will be made. Los Angeles will be reached Friday, June 23, at 9:00 p. m. Full information concerning this tour is contained in a little booklet, which may be obtained from Secretary Stevens.

EASTERN STATES SPECIAL.—Pullman cars to be attached to American Medical Special at Chicago over Santa Fe in care of Beekman Tourist Company, arranged by Dr. E. R. Campbell, manager of A. M. A. Outing Club, will leave Boston via Boston & Maine and New York Central Lines Tuesday, June 20, at 12:30 p. m., arriving at Chicago at 5 p. m. Wednesday, leaving Chicago at 8 p. m., joining American Medical Special. Members and friends may join anywhere en route. Special circulars, reservations, etc., may be obtained from Dr. E. R. Campbell, Bellows Falls, Vt.

RETURN TRIPS

As will be noted, several of these tours provide for the return trip by different routes, with interesting side trips. Full information about them can be obtained from the railroads or from the parties named above. In the advertising pages of THE JOURNAL, now and in later issues, will be found announcements of many of these railroads and trips. Members are urged to secure the booklets and folders issued by the railroads concerning these trips and post themselves in order to secure the greatest advantages from the visit to the west.

There are numerous ways of returning from the meeting, all of which offer advantages that will appeal to the members and their friends. The return trip from Los Angeles may be made by boat to San Francisco, Portland and Seattle, or by the southern routes over the Southern Pacific, the Rock Island, the Santa Fe, the Salt Lake route or through San Francisco by way of the Southern Pacific and Union Pacific, which offers opportunity for a side trip to the Yellowstone Park and a visit to Salt Lake and all the points of interest in Colorado. Or the return trip may be made by the northern routes—the Northern Pacific, the Chicago, Milwaukee and St. Paul, the Great Northern or the Canadian Pacific—visiting the cities of the northwest and Yellowstone Park.

XUM

PERSONNEL OF HOUSE OF DELEGATES

Membership of the Legislative Body of the Association

Below is a list of the holdover delegates and of the newly elected members of the House of Delegates, who have been reported to THE JOURNAL up to the time of going to press. A complete list is impossible in this issue as a number of state societies have yet to hold their meetings at which delegates will be elected.

STATE DELEGATES

ALABAMA
Mack Rogers, Birmingham.
W. H. Sanders, Montgomery.

ARIZONA
Ancil Martin, Phoenix.

ARKANSAS
Joseph T. Clegg, Siloam Springs.

CALIFORNIA
Joseph L. Milton, Oakland.
O. D. Hamlin, Oakland.
Granville MacGowan, Los Angeles.

COLORADO
Hubert Work, Pueblo.
Edward Jackson, Denver.

CONNECTICUT
E. J. McKnight, Hartford.
D. Chester Brown, Danbury.

DELAWARE
James H. Wilson, Dover.

DIST. OF COLUMBIA.
Wm. C. Woodward, Washington.

FLORIDA
J. Harris Pierpont, Pensacola.

GEORGIA
W. H. Daughty, Jr., Augusta.
U. F. Harris, Atlanta.

ILLINOIS
W. F. Grinstead, Cairo.
E. W. Weis, Ottawa.
S. C. Glidden, Danville.
J. E. Allaben, Rockford.
A. L. Brittin, Athens.
J. L. Wiggins, E. St. Louis.

INDIANA
A. C. Kimberlin, Indianapolis.
C. H. McCully, Logansport.
Miles F. Porter, Ft. Wayne.
F. A. Tucker, Noblesville.

IOWA
D. S. Fairchild, Clinton.
D. C. Brockman, Ottumwa.

CANAL ZONE
W. C. Gorgas, Ancon.

KANSAS
O. P. Davis, Topeka.
M. Trueheart, Sterling.

KENTUCKY
B. F. Van Meter, Lexington.
W. W. Richmond, Clinton.
Curran Pope, Louisville.
A. T. McCormack, Bowling Green.

LOUISIANA
Chas. Chassaignac, New Orleans.

MAINE
Alfred D. Sawyer, Ft. Fairfield.

MARYLAND
Ridgely B. Warfield, Baltimore

MASSACHUSETTS
Horace D. Arnold, Boston.
Homer Gage, Worcester.
O. J. Brown, North Adams.
F. H. Thompson, Fitchburg.
F. G. Wheatley, N. Abington.
Hugh Cabot, Boston.

MICHIGAN
E. T. Abrams, Dollar Bay.
F. W. Robbins, Detroit.
R. R. Smith, Grand Rapids.

MINNESOTA
C. F. McComb, Duluth.
George D. Head, Minneapolis.

MISSISSIPPI
J. W. Young, Grenada.

MISSOURI
A. W. McAlester, Kansas City.
J. D. Brummall, Salisbury.
C. R. Woodson, St. Joseph.

MONTANA
T. D. Tuttle, Helena.

NEBRASKA
P. H. Salter, Norfolk.

NEVADA
J. E. Pickard, Reno.

NEW HAMPSHIRE
Ferdinand A. Stillings, Concord.

NEW JERSEY
C. R. P. Fisher, Bound Brook.
Alexander Marcy, Riverton.
E. L. B. Godfrey, Camden.

NEW MEXICO
L. L. Cahill, Springer.

NEW YORK
J. Riddle Goffe, New York City.
W. H. Thornton, Buffalo.
H. S. Houghton, New York City.
J. E. Weeks, New York City.
D. H. Murray, Syracuse.
A. T. Bristow, Brooklyn.
Edward E. Cornwall, Brooklyn.
Henry L. Elsner, Syracuse.
James W. Fleming, Brooklyn.
Wesley T. Mulligan, Rochester.
Edgar A. VanderVeer, Albany.

NORTH CAROLINA
J. Howell Way, Waynesville.
J. F. Highsmith, Fayetteville.

OHIO
B. R. McClellan, Xenia.
George M. Todd, Toledo.
B. H. Blair, Lebanon.
D. O. Weeks, Marion.

OREGON
C. J. Smith, Pendleton.

PENNSYLVANIA
Americus R. Allen, Carlisle.
Alex. R. Craig, Philadelphia.
Geo. W. Guthrie, Wilkes-Barre.
John B. Lowman, Johnstown.
H. G. McCormick, Williamsport.
Thomas D. Davis, Pittsburg.
Thos. S. Arbuthnot, Pittsburg.
Fremont W. Frankhauser, Reading.
Wm. T. Hamilton, Philadelphia.

PHILIPPINE ISLANDS
W. E. Musgrave, Manila.

RHODE ISLAND
John Champlin, Westerly.

SOUTH CAROLINA
John L. Dawson, Charleston.
E. A. Hines, Seneca.

SOUTH DAKOTA
T. B. Smiley, Mt. Vernon.

TENNESSEE
Jere L. Crook, Jackson.

TEXAS
W. B. Russ, San Antonio.

UTAH
Aug. C. Behle, Salt Lake City.

VERMONT
J. N. Jenne, Burlington.

VIRGINIA
W. E. Anderson, Farmville.

WASHINGTON
J. R. Yocum, Tacoma.
Wilson Johnston, Spokane.

WISCONSIN
L. F. Bennett, Beloit.
C. S. Sheldon, Madison.
A. H. Levings, Milwaukee.

DELEGATES FROM THE SECTIONS

PRACTICE OF MEDICINE
J. A. Capps.....Chicago

SURGERY
A. F. Jonas.....Omaha

OBSTETRICS AND GYNECOLOGY
A. E. Benjamin.....Minneapolis

OPHTHALMOLOGY
John C. Bossidy.....Boston

LARYNGOLOGY AND OTOLOGY
H. W. Loeb.....St. Louis

DISEASES OF CHILDREN
A. C. Cotton.....Chicago

PHARMACOLOGY AND THERAPEUTICS
Reid Hunt.....Washington, D. C.

PATHOLOGY AND PHYSIOLOGY
Walter L. Bierring Iowa City, Ia.

STOMATOLOGY
G. V. I. Brown.....Milwaukee

NERVOUS AND MENTAL DISEASES
Theodore Diller.....Pittsburg, Pa.

DERMATOLOGY
J. A. Fordyce.....New York

PREVENTIVE MEDICINE AND PUBLIC HEALTH
J. N. Hurty.....Indianapolis

DELEGATES FROM GOVERNMENT SERVICES

Jefferson R. Kean.....United States Army
C. P. Bagg.....United States Navy
G. B. Young.....U. S. P. H. and M.-H. Service

THE GENERAL MEETING

Program of the Opeing Meeting on Tuesday Morning

The General Meeting will be held in the Baptist Auditorium, Fifth and Olive Streets, Tuesday, June 27, at 10:30 a. m. This is the formal opening of the scientific functions of the Association and the only time the whole convention will be assembled in one place. The program is as follows:

Music.
Call to order by PRESIDENT WILLIAM H. WELCH, Baltimore
Invocation by the RT. REV. JOSEPH H. JOHNSON, Los Angeles.
Addresses of Welcome.
DR. W. JARVIS BARLOW, President of the Los Angeles County Medical Association.
DR. THOMAS W. HUNTINGTON, San Francisco, President of the Medical Society of the State of California.
HON. H. W. JOHNSON, Governor of California.
HON. GEORGE ALEXANDER, Mayor of Los Angeles.
Introduction of foreign guests.
Report of Local Committee on Arrangements—Chairman, DR. H. BERT ELLIS, Los Angeles.
Introduction and Installation of the President-Elect—DR. JOHN B. MURPHY, Chicago.
Address by the President—DR. JOHN B. MURPHY.
Music.
Adjournment.

CLASS AND COLLEGE REUNIONS

Miscellaneous Information Concerning the Western Country and the Trip to Los Angeles. Entertainment En Route

As is usual at the annual meeting of the Association, there will be a number of class and college reunions. The times and places of holding these will be announced at Los Angeles.

The reunion of the alumni of Cook County Hospital will be held on the evening of Friday, June 30, at the Casa Verdugo, a resort in the foothills a short distance from Los Angeles, reached by a trolley line. An old-style Spanish dinner will be served under the pepper trees. The reunion is in charge of Dr. W. W. Richardson and Dr. Harvey L. Thorpe. Los

Angeles. Information concerning this dinner may also be had from Dr. William R. Cubbins, 29 West Madison Street, Chicago.

The annual woman's banquet will be given at the Hotel Westminster, Tuesday evening, June 27.

The local chapter of Alpha Epsilon Iota fraternity will give a dinner to visiting members at the Union League Club, Thursday evening, June 29.

Arrangements have been made by the King County Medical Society at Seattle, Wash., in connection with the Seattle Commercial Club, for a committee to entertain the members of the American Medical Association who may pass through Seattle on their way to attend the meeting or on their return.

The Riverside County Medical Society also invites all physicians to visit Riverside, take the 16-mile auto ride through the orange groves and enjoy the courtesies provided.

At Los Angeles the Chamber of Commerce maintains an interesting museum of the products of California and the West, both mineral and agricultural. Practically the whole state may be seen in picture form at these lectures.

OTHER MEETINGS

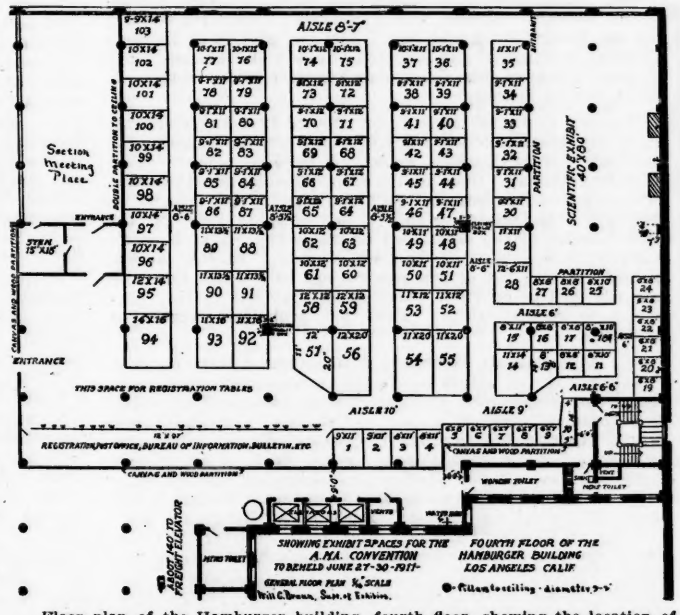
Among the other scientific meetings which may be attended by members and vistors to the Los Angeles meeting of the A. M. A. are the following:

The convention of the National Association for the Study and Prevention of Tuberculosis, which meets at Denver, June 20 and 21. Stopovers will be allowed at Denver, as well as at other points, on the going trip to Los Angeles, and the meeting of the Tuberculosis Congress may be attended, and then the special trains running through Denver may be joined for the remainder of the trip. Information may be had from Dr. Livingston Farrand, 105 East Twenty-Second Street, New York.

The American Academy of Medicine will hold its sessions in Los Angeles on Saturday and Monday preceding the meeting of the A. M. A. For full information address Dr. Charles McIntire, 52 N. Fourth Street, Easton, Pa.

The annual meeting of the American Medical Association Public Health Education Committee will be held in the Y. W. C. A. Building, 251 S. Hill Street, Los Angeles, Monday, June 26, at 5 p. m. Particulars and program may be obtained from Rosalie Slaughter Morton, M.D., Chairman, 701 Madison Avenue, New York.

The twelfth annual session of the American Association of Medical Examiners will be held at Los Angeles, June 26 and 27, 1911. Information may be obtained from Dr. Liston H. Montgomery, president, 108 North State Street, Chicago.



Floor plan of the Hamburger building, fourth floor, showing the location of the Registration Bureau, where each member should register as soon as he can name his hotel; also the Postoffice, Scientific Exhibit, Daily Bulletin office and the Commercial Exhibit. The accompanying list shows what firms will occupy the various numbered spaces.

THE COMMERCIAL EXHIBIT

Outlook for an Interesting Exhibit of Distinct Quality

The commercial exhibit at the Los Angeles meeting will be found in Hamburger's hall on the fourth floor of the Hamburger Building at Eighth Street and Broadway. In this commodious and well-lighted room will be found an exhibition of books, surgical instruments and appliances, *x*-ray and other electric apparatus, and of pharmaceutical preparations and foods, which, while it may not be as large as the exhibits at some of the eastern meetings of the Association, will be of high quality.

Efforts will be made by all of the exhibitors at this meeting to demonstrate their various exhibits rather from the scientific side than from the purely commercial aspect, and the demonstrators of the scientific apparatus, drugs, etc., will be men who are experts in their respective lines. The exhibit will, therefore, have a distinct educational value to physicians who will devote some time to it.

All correspondence with reference to reservations should be sent to Mr. Will C. Braun, superintendent of exhibits, 535 Dearborn Avenue, Chicago. Dr. W. H. Kiger, Consolidated Building, Los Angeles, is the chairman of the Los Angeles committee on commercial exhibits.

The accompanying diagram of the exhibit hall shows the locations of the booths. The following firms will be represented at this exposition. Other reservations have also been made by firms who have not submitted descriptions of their exhibits.

Publishers and Books

D. APPLETON & CO., NEW YORK, SPACE 2.—This exhibit will be under the direction of the manager of the San Francisco office and a competent corps of salesmen who will show the new editions. A work which will excite interest is their "Cross Section Anatomy," by Dr. Albert C. Eycleshymer of St. Louis. Other publications are Dieulafoy's "Practice of Medicine;" Pick and Hecht's "Clinical Symptomatology;" Kolle's "Plastic and Cosmetic Surgery;" Reik's "Diseases of the Ear, Nose and Throat," and a new edition of Pusey's "Dermatology." The above mentioned books have all been published since January 1, 1911. They will also show advance sheets of Guiteras' "Urology," and Kelly's "Diseases of the Kidneys."

AUSTIN'S STEREOSCOPIC *X*-RAY ANATOMY, SAN DIEGO. SPACE 11.—A collection of carefully selected life-size stereoscopic *x*-ray pictures, mounted on cards 12 by 17 inches, each of the pair being 8 by 10 inches, taken with the most modern of interrupterless machines, of all the normal joints, of the joints during development, of all the arteries injected, of the cavities, and parts of the intestines, being an anatomy at a glance for student and practitioner. Pictures are viewed through a prism stereoscope (making pictures of this size possible), mounted, so as to change without changing the focus.

P. BLAKISTON'S SON AND CO., PHILADELPHIA. SPACE 58.—Among the books of great interest and sound service at Blakiston's exhibit are: Hurry's "Vicious Circles," Collins and Mayou's "Pathology of the Eye," Eden's "Gynecology," the recent editions of Tyson's "Practice," Wilcox's "Treatment," "Practitioners' Medical Dictionary," J. J. Kyle's "Ear, Nose and Throat," Wiley's "Foods and Their Adulteration," Brophy's "Oral Surgery," Bransford Lewis and E. G. Marks' "Cystoscopy," and a translation of Curschmann's "Nervous Diseases," edited by Charles W. Burr. The splendid works by John B. Deaver should attract attention because of his recent recall to the professorship in the University of Pennsylvania.

J. B. LIPPINCOTT COMPANY, PHILADELPHIA. Space 88.—Promise something new in the way of a picture display this year. The secret has not yet been divulged, but those who come expectant will not be disappointed. The profession should also be interested in Volume 2 of Keibel and Mall's "Human Embryology," the work of the two most famous American and foreign embryologists; David Bovaird, Jr.'s, "Internal Medicine," for students and practitioners; and new editions of Lippincott's New Medical Dictionary, Ortner's "Treatment of Internal Diseases," based on the fifth German edition, Emerson's "Clinical Diagnosis," and "Essentials of Medicine," Cohnheim's "Diseases of the Digestive Canal," Schmidt's "Pain," based on the second German edition, Davis' "Mother and Child," and Noguchi's "Serum Diagnosis of Syphilis," etc.

C. V. MOSBY MEDICAL BOOK AND PUBLISHING COMPANY, ST. LOUIS. Space 18.—This firm will show the new edition of Crossen's "Diagnosis and Treatment of Diseases of Women," recognized as the leading text-book for the general practitioner; Cables' "Golden Rules of Diagnosis and Treatment of Diseases;" second edition of Zahorsky's "Golden Rules of Pediatrics;" new third edition of Munro's "Suggestive Therapeutics;" Beck's "Use of Bismuth Paste in Chronic Suppurations;" Longyear's "Nephrocoloptosis," and Dock-Bass' "Hookworm Disease;" advance sheets of Loeb's "Operative Surgery of the Nose, Throat and Ear;" the new edition of Kocher's "Operative Surgery" and Allbutt's "System of Medicine;" also a general line of new German and French books. Dr. L. A. Duck will be in charge.

REBMAN COMPANY, NEW YORK. Space 12.—An assortment of highly scientific books, many of which are illustrated by the four-color process, which renders a life-like appearance of diseases, especially those of the skin, possible, and the latest literature on "Salvarsan" will be found. Of interest is Whitby's "Makers of Man," a psychologic study of the individuality of the great men of the world. A book on an entirely new subject is Kilner's treatise, "Human Atmosphere." A long list of new publications by Rebman Company recently will be on view, which it will pay the visiting physician to enquire about. Their art prints are worthy of attention.

W. B. SAUNDERS COMPANY, PHILADELPHIA AND LONDON. Spaces 94 and 95.—Just within the entrance and opposite the Bureau of Registration and Information and the Post Office, this house will exhibit Musser and Kelly's "Practical Treatment;" Cabot's "Differential Diagnosis;" Davis' "Operative Obstetrics;" "The 1910 Papers by the Staff of St. Mary's Hospital, Mayo Clinic;" Anders and Boston's "Medical Diagnosis;" Morrow's "Diagnostic and Therapeutic Technic;" Pilcher's "Practical Cystoscopy;" Buchanan's "Veterinary Bacteriology;" Keen's "Surgery;" Mumford's "Surgery;" Crandon's "Surgical After-Treatment;" Cotton's "Dislocations and Joint Fractures;" Sisson's "Veterinary Anatomy;" also advance sheets of Dr. Howard A. Kelly's "Cyclopedia of American Medical Biography."

WILLIAM WOOD & CO., NEW YORK. Spaces 3 and 4.—Have spared no expense in exhibiting their high-class medical books. Noteworthy among these is the "American Practice of Surgery," which has just been completed. An epoch-making book is Steadman's Medical Dictionary. Witthaus' Manual of Toxicology has just issued from the press. Also, a revised edition of Walker's Introduction to Dermatology, containing forty-three colored plates, besides numerous engravings. "Joint-Tuberculosis," by Leonard W. Ely, will attract much attention. In addition to the above, one hundred new books by these publishers attest their continued activity and progressiveness.

Pharmaceuticals and Biologic Products

ABBOTT ALKALOIDAL COMPANY, CHICAGO. Spaces 56 and 57.—The special features of the exhibit of this company will be the demonstration of the methods of manufacturing granules and tablets of the active-principle and similar remedies by skilled laboratory workers, illustrating both the hand and machine methods. In addition this company will present a large line of alkaloidal and active-principle remedies, as they extract them from the drugs and in finished forms. Their interesting line of Council-passed specialties will also be demonstrated.

ARLINGTON CHEMICAL COMPANY, YONKERS, N. Y. Space 1.—Will be occupied jointly by the Arlington Chemical Co. and the Palisade Manufacturing Co., makers of liquid and dry peptonoids and hemaboloids. In accordance with the well-known policy of these manufacturers there will be a display of interesting and instructive charts of food values, together with an exhibit of the various constituents of the preparations. Courteous and capable representatives will be ready to explain the preparations and answer any questions regarding them. A handsome souvenir is in preparation, which will be presented to every physician who visits the exhibit.

ARMOUR & CO., CHICAGO. Space 93.—Remarkable progress has been made in the last decade in the field of the ductless glands, which are gradually yielding their therapeutic secrets to the industry of the experimental biologist. Brilliant results are now obtained by pure suprarenal preparations and the purified thyroid proteids. Hypersecretion of the pituitary is definitely known to result in acromegaly and gigantism. Recently the thymus has been suggested for relief in inoperable cancer. Many lecithins and organ lipoids apparently play an important rôle in immunizing processes. The organotherapeutic exhibit of this firm will be demonstrated by scientific experts and should be of great interest.

EDWARD G. BINZ, LOS ANGELES. Space 22.—This display will consist of apparatus in full operation, showing the process of distilling and refining eucalyptus oil from the leaf to the finished oil. It will be a demonstration of the production of a superior pharmacopeial product and not of a proprietary article with a trade name.

BURROUGHS WELLCOME & CO., NEW YORK. Space 54.—This firm will display a selection of their products under "Tabloid," "Soloid," "Vaporole," "Enule," "Wellcome," and other of their well-known trade-marks, representing modern methods as applied to medicinal preparations. Also "Tabloid" brand compressed surgical dressings and bandages, including "Tabloid" brand bismuth gauze, a recent addition to the firm's list; medical equipments of extreme compactness and portability, ranging in size and scope from the equipment similar to that carried by many well-known explorers, to a physician's breast pocket case; "Tabloid" hypodermic and ophthalmic pocket cases, including the popular "Mussell Shell" hypodermic case, etc.

CUTTER LABORATORY, BERKELEY, CAL. Space 82.—Serum Antitoxin and Globulin Antitoxin will be displayed by this firm; also their syringe containers with flexible needle connection. An interesting demonstration showing the steps employed in the preparation and data respecting the administration of the various antitoxic products will make this exhibit of unusual scientific value.

FAIRCHILD BROS. & FOSTER. Space 98.—Will exhibit "ampoules" for hypodermatic injection, trypsin, pancreas extract (non-enzymic), lecithin; capsules especially designed for the administration of pancreas gland products; "Laibose," soluble wheat and whole milk in granular form; Fairchild's culture-peptone from entire beef, especially prepared for bacteriologic work.

HOFFMANN-LA ROCHE CHEMICAL WORKS, New York (branch of F. Hoffmann-La Roche & Company, Basle, Switzerland, and Grenzach, Germany). Space 37.—This exhibit will repay careful inspection. A duplicate of the exhibit that was made at the St. Louis Convention, when it was declared one of the most "aristocratic" in the building. Here will be found such alkaloids as homatropin, eserin, pilocarpin, hyoscin and a host of others. The specialties, Digalen, Thiocol, Thigenol, Airol, Secacornin, etc., will be exhibited and their therapeutic qualities explained by competent representatives.

H. K. MULFORD COMPANY, PHILADELPHIA, Space 92.—Will exhibit five cases of biologic products containing, respectively, diphtheria antitoxin and serums, bacterial vaccines and tuberculins, diagnostic reagents, including serodiagnosis of typhoid fever and syphilis; rabies vaccine, and Neisser bacterin, mixed. The exhibition will also comprise working bulletins describing these products.

HENRY K. WAMPOLE & COMPANY, PHILADELPHIA. Space 76.—This company will make an exhibit of elegant pharmaceuticals, comprising pulverous pills, compressed tablets, fluid-extracts, elixirs, effervescent salts, capsules, etc., and direct especial attention to the new things brought out during the past year, and to its ability to produce efficient and elegant products for the physician.

Instruments and Furniture

W. D. ALLISON COMPANY, INDIANAPOLIS. Spaces 102 and 103.—Have added several new and useful tables and cabinets to their line, and will have on display a new style, medium-priced table, two new and very attractive designs in instrument cabinets, and being now the owners of the patents on the Yale and Oxford chairs, these articles will be presented in connection with their high-grade automatic tables, medicine and instrument cabinets and specialities. All of these have

been proved indispensable appliances in the practice of medicine during the past twenty-five years.

FRANK S. BETZ CO., CHICAGO AND HAMMOND, IND. SPACES 62, 63, 64 AND 65.—This company will make an exhibition of a general line of surgical instruments, special razor-operating knives manufactured by experienced razor makers, nose and throat instruments imported from Vienna, also *x*-ray coils, electrical outfits for general and diagnostic purposes and a variety of artificial legs. The special feature of the exhibit will be the great variety of operating knives, among which will be shown the Mayo, Murphy, Cubbins, Weist and Old English models.

CAVASCOPE CO., ST. PAUL, MINN. SPACE 8.—This company will exhibit the Cavascope, which combines an auriscope, a nasal speculum and two styles of tongue-depresser. It is self-illuminated from a dry battery, which may be obtained anywhere, an effective one being the Tungsten battery, which will give 400 per cent. greater service than any other. The instrument is easily sterilized and may be carried in the pocket.

F. A. HARDY & COMPANY, CHICAGO. Space 89.—A complete line of eye, ear, nose and throat surgical instruments as well as a number of ophthalmologic specialties will be exhibited. The special features of this exhibit will be a number of handmade instruments entirely new in design, surpassing anything ever shown heretofore. The special Los Angeles edition of the "Hardy Messenger" will illustrate each of the new designs and will be distributed at the exhibit.

KENISTON AND ROOT, LOS ANGELES. Spaces 90 and 91.—A general line of standard surgical instruments, physicians' office equipment and hospital supplies will be demonstrated and displayed by this firm. In this exhibit will be included that of the Kny-Scheerer Co., of New York City.

E. B. MEYROWITZ, NEW YORK. Spaces 48, 50 and 51.—Ophthalmologic apparatus, eye, ear, nose and throat instruments embracing many recent inventions, among which may be mentioned a new model of ophthalmometer, Yankauer's eustachian instruments, a full line of bronchoscopic instruments and illuminating apparatus will be found. This firm manufactures and will show the well known Marple electric ophthalmoscope, Coakley electric light stand and the Meyrowitz socket rheostat. The new Meyrowitz-McCaa unipulsator will be shown, a complete instrumentarium for *x*-ray and high-frequency work.

PACIFIC SURGICAL MANUFACTURING CO., LOS ANGELES, CAL. Space 19.—A complete line of physicians' apparatus and hospital equipment and supplies will be exhibited by this company.

Apparatus

ANATOMIK FOOTWEAR COMPANY, NEW YORK. SPACE 78.—An exhibit of men's, women's and children's Anatomik shoes for the relief of mild cases of flat foot and for the prevention of foot troubles. Anatomik shoes are made on a special last devised by Dr. Harlan P. Cole of New York. Mr. Alick Weir, in charge of the exhibit, will be glad to explain the features of the special shoes made by this company for bad cases of flat-foot and for various forms of talipes.

BAUSCH & LOMB OPTICAL CO., ROCHESTER, N. Y. Space 79.—They will show a line of their newest models of microscopes, microtomes, centrifuges and other laboratory apparatus and supplies for physicians' use. A new instrument, a convertible balopticon will be shown, which projects lantern slides, opaque illustrations and objects and microscopic objects; in fact it can be used for any known form of projection. It will be especially appreciated by those interested in the projection of microscopic objects.

DEVILBISS MANUFACTURING COMPANY, TOLEDO, O. SPACE 15.—The use of the atomizer in the treatment of nose and throat affections will be interestingly covered in the complete exhibit of the DeVilbiss Manufacturing Company of Toledo, O., who will have on display a full line of their well-known medicinal atomizers, nebulizers and powder blowers.

DUNTLEY MANUFACTURING CO., CHICAGO, SPACE 81.—This exhibit will consist of the Duntley pneumatic cleaner, and the new Duntley air cooler and purifier. The latter is a little device with a capacity of from 200 to 600 cubic feet of air per minute. The air passing through water, is cooled and purified, and all of the floating matter is removed—thus reducing the danger of infection in operating rooms and hospitals. The firm will exhibit two types of the air cooler and purifier. The exhibit will be in charge of Dr. Carl L. Barnes, who will gladly furnish laboratory reports and descriptive circulars to all physicians who may be interested.

ERNST LEITZ, NEW YORK CITY. SPACE 96.—Of particular interest will be the two new Leitz models of physicians' microscopes and their "dark field" illuminating outfit—so necessary with the Wassermann test. Their new form Edinger apparatus for the drawing and projection of microscopic and lantern slides—a universal apparatus, as it may also be used for micro-photography—is of especial scientific value. The large microphotographic apparatus will also be exhibited.

RANDALL-FAICHNEY CO., BOSTON. Spaces 27 and 28.—Standard clinical thermometers and original designs of hypodermic syringes will be exhibited by this firm. The careful methods pursued in testing and grading clinical thermometers will be demonstrated for the benefit of the visiting physicians.

TAYLOR INSTRUMENT COMPANIES, ROCHESTER, N. Y. SPACES 60 AND 61.—This exhibit will contain a comprehensive line of samples, covering particularly their Dr. Rogers' "Tycos" sphygmomanometer, their "Tycos" fever thermometers, urinalysis and urinary glass ware, etc. The exhibit will be in charge of representatives who are prepared to give demonstrations of readings of both diastolic and systolic blood-pressure with the "Tycos" sphygmomanometer. A new booklet on the Dr. Rogers' "Tycos" sphygmomanometer, giving some interesting data on the determination of blood-pressure, will be distributed.

WILMOT CASTLE COMPANY, ROCHESTER, N. Y. SPACE 6.—This company will exhibit a four-piece Rochester sterilizing outfit, "physician's" size, comprising an instrument sterilizer, a dressing sterilizer and hot and cold water sterilizers. Instruments are sterilized by boiling; dressings by circulating steam; also a three-piece outfit of a smaller size, called the "Specialist's," adapted for eye, ear, nose and throat work. A Castle pressure dressing sterilizer will show the separate generator, the complete surrounding of the sterilizing chamber (except in front) by a steam chamber, the single valve control, the production of a vacuum in the sterilizing chamber and the simplicity and effectiveness of its locking device.

Apparatus—Electric

ELECTRO-SURGICAL INSTRUMENT CO., ROCHESTER, N. Y. SPACE 5.—In addition to a complete line of all its well-known electrically lighted surgical instruments the company will exhibit a number of new instruments, representing the highest present development of electrically lighted surgical and diagnostic instruments, constructed after the designs of eminent specialists, who have taken particular interest in making suggestions for improvements based on their practical experience. Besides the instruments themselves the exhibit will include the latest forms of batteries, controllers and transformers.

KELLEY-KOETT MFG. CO., COVINGTON, KY. Spaces 68 and 69.—This company will make a demonstration of their *x*-ray appliances under the direct supervision of Mr. J. Robert Kelley, designer and senior member of the firm, who extends a cordial invitation to the profession, especially those of the Pacific Coast, and past patrons who may desire information relative to apparatus already in use.

ROCHESTER SURGICAL APPLIANCE COMPANY, ROCHESTER, N. Y. Space 17.—These makers of electrically lighted instruments, will exhibit their latest models for use as diagnostic aids in the examination of affections of the nose, throat, esophagus, urethra, etc. Instruments for transillumination tests, also electrical controllers, etc., will be other noteworthy features.

SCHEIDEL-WESTERN X-RAY COIL CO., CHICAGO. SPACES 29 AND 30.—Will have an unusual scientific display of advanced apparatus for making *x*-ray negatives and diagnoses by the most approved methods. The increased popularity of the *x*-ray for diagnosis and the attention given to improved technic has resulted in wonderful improvements. They will demonstrate the latest interrupterless machine with which the fastest negatives, showing detail, have ever been made, and in addition to this their small portable instrument. The former radiographic special will also be there, as well as a stereoscope, plate changer, *x*-ray protection tube-stand, etc.

VICTOR ELECTRIC COMPANY, CHICAGO. SPACES 32, 33, 34 AND 35.—This company will display between seventy-five and one hundred different pieces of electro-medical apparatus, which will be demonstrated by a corps of experts. The past year has brought out many new developments in physiologic therapeutics in the way of new machines, modernized methods, improved technic, etc. The Victor Electric Co. have had to increase their facilities recently by erecting a new building at Jackson Boulevard and Robey street, Chicago, which they are now occupying.

XUM

WAPPLER ELECTRIC MFG. COMPANY. Space 77.—In their display of electro-medical and surgical apparatus this company will show many new and radical features. Their cystoscopes have a new, brilliant lens system showing the right-sided and upright picture, a brighter field, and a 30 per cent. larger angle of vision than has ever been obtained before. This lens system is being adapted to all of their diagnostic instruments including the pharyngoscope. Also a new type of interrupterless *x*-ray and therapeutic apparatus, perfect for rapid *x*-ray and all kinds of high-frequency treatment, the Excell treatment machine, the Wappler wall plate with their perfect sinusoidal machine, etc.

Foods, Milk Preparations, Etc.

BASS ISLANDS' VINEYARDS CO., SANDUSKY, O. SPACE 13.—Visitors are invited to look up the exhibit of this Company, and try their Catawba "Bass Islands Grape Juice." This is an unfermented Grape Juice and a most pleasing beverage, recommended on the ground that Catawba grape juice is more beneficial than the juice of the dark Concord grape, because it contains less tannin.

BORDEN'S CONDENSED MILK CO., NEW YORK. SPACES 99, 100 AND 101.—Will exhibit their Malted Milk and call particular attention to the special process by which it is prepared and the predigestion of the casein of the milk due to this process, which is peculiar to the Borden Company. They also emphasize the palatability of the food, it being free from excessive sweetness. They point with pride to their record of fifty years' handling of milk products as a guarantee of the excellence of their goods. They will furnish analysis and comparative table of energy values to all physicians.

FRANCO-AMERICAN FOOD CO., JERSEY CITY. SPACE 36.—Franco-American broths for invalids will be shown as a useful necessity in the sick room diet, easily digested and very stimulating. The company calls attention to these broths as containing 33⅓ per cent. more food value than soups, purposely made without vegetables, spices or seasoning, and retained by the most delicate stomach. They are packed in half pint sanitary tins, so as to remain fresh as long as the tin is left unopened. A full line of these foods will be exhibited.

HAWAIIAN PINEAPPLE PRODUCTS CO., LTD., SAN JOSE, CAL. SPACES 23 and 24.—Physicians will be given an opportuntity to investigate the merits of Dole's Pure Hawaiian Pineapple Juice, which is pressed and bottled by this firm in Honolulu.

HORLICK'S MALTED MILK CO. SPACES 72, 73, 74 AND 75.—This firm will show Horlick's Malted Milk and urge its use as an easily digested food product in powder form, prepared from pure fresh cow's milk, combined with the extracts of malt, barley and wheat, the starch of which has all been converted by the action of the diastase of the malt, and ready for immediate use by simply dissolving in hot or cold water; uniform and reliable, manufactured under ideal sanitary conditions, with the experience, methods and apparatus evolved through work of over a century in this line.

MELLIN'S FOOD COMPANY, BOSTON. SPACE 14.—To the visiting physicians who so desire this company's representatives will be pleased to show analyses and food values of Mellin's Food itself, and as prepared with milk; also to explain its use in the modification of milk. They will also cheerfully answer questions regarding the variation of proportions of food constituents necessary to obtain the most satisfactory results in individual cases.

WELCH GRAPE JUICE COMPANY, WESTFIELD, N. Y. SPACES 66 and 67.—Will have an exhibit of their well-known product, as usual.

Artificial Limbs and Supportive Appliances

AMBULATORY PNEUMATIC SPLINT MANUFACTURING CO., CHICAGO. SPACE 10.—Makers of ambulatory pneumatic fracture splints, orthopedic appliances, artificial limbs, trusses, corsets, elastic hosiery and "Ambumatic" washable abdominal supporters. Under the direction of Mr. Sæmann the exhibit will consist of a scientific demonstration of the Ambulatory Pneumatic Splint, the application and use of these walking adjustable splints for the comfortable and successful treatment in bed or walking of fractures of the lower limbs, including those of hip and hip-joint disease. "Ambumatic" supporters for all kinds of abdominal or pelvic support will also be shown.

CARNES ARTIFICIAL LIMB COMPANY, KANSAS CITY, MO. SPACE 59.—Will exhibit an artificial arm and hand made of steel and fiber of such ingenious mechanical construction as to enable the wearer automatically to bend the elbow, bend and turn the wrist and open and close the fingers, and write; strong enough to pick up and carry a weight of fifty pounds with ease. Demonstrated by men wearing the arm for upper and lower amputations.

WM. JONES, DENVER, SPACE 9.—An automatic, adjustable truss will be demonstrated by this firm. This truss is said to have an automatically operating, even pressure, compensating movement that is governed by the motion of the body, so that it will yield reciprocally with easy, positive, variable and equal pressure action to the variable breathing and other natural movements of the body. There are many other practical features of this appliance that will be shown.

Mineral Waters

APOLLINARIS AGENCY COMPANY, NEW YORK. SPACE 7.—This company will exhibit Apollinaris Water as a mildly alkaline and naturally effervescent table water, bottled only at the Apollinaris Spring, Neuenahr, Germany, and only with its own natural gas, as stated on the label. The same company will also exhibit "Apenta," the Hungarian natural aperient water, calling attention to its reputation for its well proportioned content of magnesium sulphate and sodium sulphate.

NATIONAL WATER COMPANY, WAUKESHA, WIS. SPACE 38.—Will exhibit "White Rock," the natural water from the celebrated White Rock Spring, and "Still Rock" in the various sized bottles and will show a package that is unique among bottled waters. New bottles are used and are sterilized before filling. The newly patented sealing contrivance will prove interesting to the physician who wishes to have the water reach his patient in the same uncontaminated condition in which it exists as it flows from the spring. Mr. Edward Westveer and Mr. R. M. Heath will have charge of the exhibit.

Sanatoria

ALLIED SANITARIUMS OF CALIFORNIA, LOMA LINDA, CAL. SPACE 25.—This exhibit will be installed under the direction of the College of Medical Evangelists, whose representatives will explain the methods employed at their various institutions.

INDIANA SPRINGS CO., KRAMER, IND. SPACE 20.—For the benefit of physicians who have never visited Mudlavia this company will maintain an exhibit showing in pictorial detail their special therapeutic agent, the Mudlavia Bath. Beginning with a view of the mud deposit in the natural state, the various steps in the process to completion of the bath will be shown; likewise the buildings and grounds with their special equipment for maintaining a high-grade sanitarium.

POTTENGER SANATORIUM, MONROVIA, CAL. SPACE 25.—This institution, which is located but forty-five minutes by trolley ride from Los Angeles, and is conducted exclusively for the scientific treatment of tuberculosis, will display views and literature describing the methods employed and accommodations offered patrons of their sanitarium.

Et Cetera

AMERICAN CASE & REGISTER COMPANY, SALEM. SPACE 86.—Will exhibit a full line of their physicians' and surgeons' systems for account keeping and case recording. This exhibit will be in charge of competent men who have been trained especially in this line of work. They claim to be the pioneers in manufacturing complete physicians' and surgeons' systems, and they wish physicians to write now for all literature pertaining to their various systems so that they can study them up, and then see the real article in Booth 86.

DEIMEL LINEN-MESH SYSTEM CO., NEW YORK. SPACE 53.—According to their usual custom this company will show their goods at Los Angeles and have reserved space 53 for the purpose. The California headquarters of this concern is at 142 Sansome Street, San Francisco. The Dr. Deimel underwear (Linen-Mesh) hardly needs any introduction. This well-known underwear was first shown at the annual meeting held at Baltimore in 1895.

SPIRELLA COMPANY, MEADVILLE, PA. SPACE 85.—Corsets and belts filled with the "Spirella stay," a wire bent in serpentine form, will be shown as a valuable aid in caring for medical cases demanding support, such as floating kidney, some cases of hernia and pendulous abdomen. The firm states that the anatomic shaping of the corset, coupled with the flexible, resilient Spirella stay used therein, allows complete freedom of muscular action. The Surgical Belts are light, simple, practical, and are said to be valuable in postoperative cases.